DECEMBER 1956 SIX DOLLARS A YEAR - ONE DOLLAR A COPY

# House 4-ome



ANK LLOYD WRIGHT designs a prefabricated house—page 117

Prefabrication's Year: the models, the men, the market-page 130

What's new in components for 1957-page 160

How to choose and use the right outside paint-page 170

Listen to Washington's best known housing secret-page 155

### Floor Plan for a Quick Sale



"Sequin" adds charm to any style of home, any room in the house. Equally important, "Sequin" inlaid linoleum offers advantages far beyond surface beauty.

Its exclusive SuperFlex® backing eliminates the need for lining felt, saving installation time and money. And since SuperFlex absorbs the strain of normal floor board movement, Gold Seal inlaid linoleum is not subject to cracking, thus reducing customer complaints. Unexcelled for new construction, it is also one of the best coverings for old wood floors when homes are remodeled.

The "Sequin" pattern will be bright and clear after years of wear, for its colors are inlaid through to the backing. The colors are easy to decorate around. And of course this amazingly economical flooring fully meets FHA title I requirements.

Your Gold Seal Dealer is listed under "Linoleum" or "Floors" in the yellow pages of your phone book. Call him and see "Sequin" in 18 glowing modern shades.

#### FOR HOME - BUSINESS - INSTITUTIONS:

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Specifications: Standard gauge with exclusive SuperFlex backing for installation over wood, concrete, or ceramic tile, above grade floors; 18 colors in 6' widths by the yard. Also 7 colors in 1/8" gauge, burlap backing.

Abrasive Wheel Test proves "Sequin" Linoleum will "look like new" through long service life!

The circular "After Test" area is the result of applying the abrasive wheel to the "Sequin" sample. See how it has worn well through the linoleum—and yet the pattern is still there, as clear and sharp as ever! Compare it with the "Before Test" area. You can't tell the difference!





\*Trademark

### ROUNDUP

### 5% FHA interest rate means a row in Congress over VA

FHA's new 5% interest rate should bring out more money for housing, but many a mortgage man thinks the increase again was too little and too late. Look for a big row in Congress over a corresponding boost for VA (see p. 36).

### FHA ponders easing terms on houses above \$9,000

FHA is considering easing down payments on houses priced just above \$9,000. On Sept. 20, the agency cut the minimum down payment on homes valued at \$9,000 or less from 7% to 5%. But stiffer terms apply above that—93% of the first \$9,250 and 73% of the excess. This means a \$10,000 house gets only a 91% mortgage, an \$11,000 house only 89.1%. Now the plan is to smooth off the steep jump in down payments. FHA has power to act without Congressional approval.

### Rising incomes, integration raise public housing vacancies

The officials who manage the nation's 412,000 units of public housing have begun to bump up against the hard fact that US incomes are going up so fast the need for public housing is evaporating. The problem came in for much discussion at the annual conference of the Natl. Assn. of Housing and Redevelopment Officials in New York City last month (see p. 81).

Public housing is beset by other aches and pains, too. It is now 43% Negro occupied and daily becoming more so as white families refuse to move into integrated projects. It is accumulating a troublesome core of problem families, often families already on welfare rolls who are displaced by other phases of urban renewal, notably freeway building. Their presence, and income limits that are now enforced instead of ignored, tend to drive the best families out of public housing. As long as this continues, cry some public housing experts, public housing cannot produce good neighborhoods.

#### Study of changes in Taft-Hartley law worries builders

Home builders fear they will be chief losers in the administration's latest effort to modify the Taft-Hartley Act for construction. Labor Secretary James P. Mitchell has just named a committee for building to recommend changes. Originally, it included no home builders, although the industry employs some 400,000 union tradesmen. After the first session, NAHB was belatedly asked to sit in. The other industry members are all from heavy construction—groups more amenable to labor pressure than builders because they do not have to sell their output after construction They are: C. H. Haxby, president of the Natl. Contractors Assn.; Paul Geary, executive vice president of Natl. Electrical Contractors Assn. and Howard T. Kelly, AGC's labor relations advisor. Labor members: Presidents Maurice A. Hutcheson of the carpenters' union and Peter Schoemann of the plumbers' union, and Richard J. Gray of AFL-CIO's building trades department.

Mitchell should find it easy to sell most of this committee his package of Taft-Hartley amendments—a package which gives labor nearly all it wants. Pre-hire agreements would be legalized, the present 30-day waiting period for compulsory affiliation would be sliced to 7 days for construction and building would be exempted from the mandatory injunction against secondary boycotts.

Cries a builder spokesman: "We are being made the fall-guys while the administration works out a masterpiece of strategic maneuvering. It will be awarding elements of the building trades for campaign help, slighting the CIO and discharging its platform promise to relax the T-H Act—all at the same time."

The secondary boycott provision has been a boon to small builders. Killing the mandatory injunction would rob home building of its biggest advantage under Taft-Hartley.

### Home improvement loans falling, new survey finds

Home improvement loans were off 8½% during the third quarter of this year, a new survey shows. The *American Banker* puts its national index of home fixup at 174 for the July-September period, down 16 points from 190 in the second quarter. The index is based on loan volume in 100 key banks during the first quarter of 1955. Home appliance financing showed a small gain between the second and third quarters of the year, from 118 to 123.

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# Style-rite triples

# We can help you sell more houses and make more profits in 1957!

**Bold Planning** plus more space-per-dollar has made Style-rite the industry's fastest-growing manufacturer.

A spectacular success in '56. And now Stylerite's on the move for '57 with what we honestly believe is the hottest line ever to hit the market! Twenty-six Contemporary and Ranch models in varying sizes.

Style-rite's newest homes for '57 are big. They're skillfully planned inside, with up to 2100 feet of livable, usable space. They're boldly planned outside, in today's most wanted styles.

They're loaded, roof to basement, with lookahead features that tempt down payment dollars.

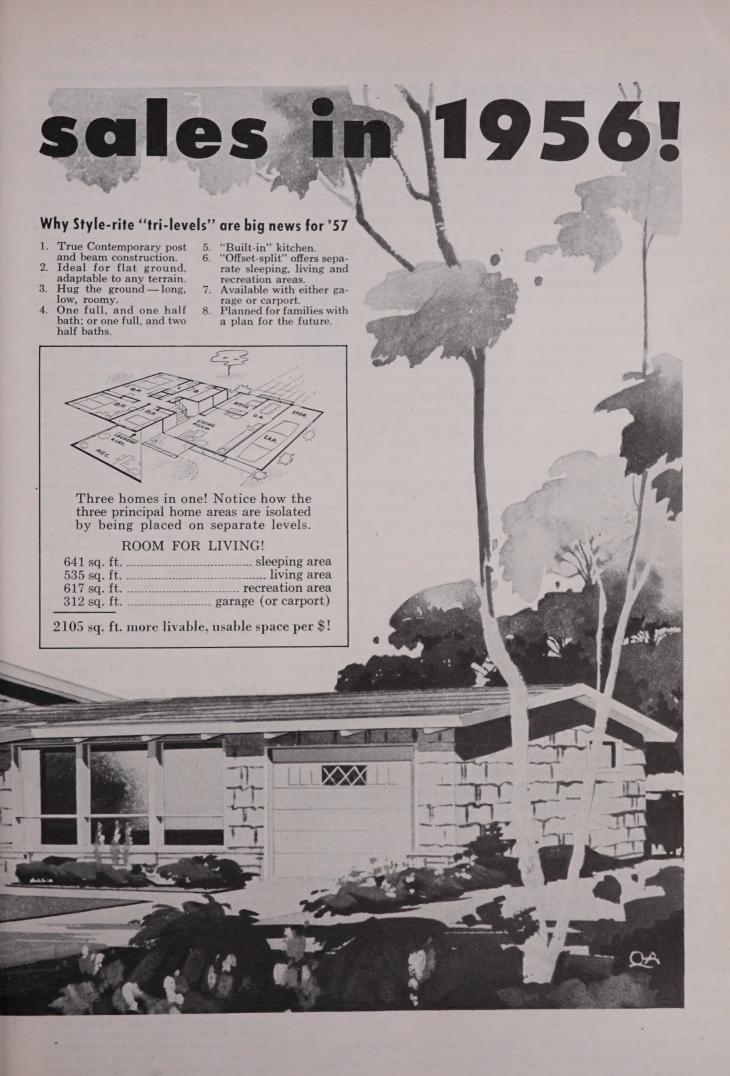
And to help you turn over your investment fast, they're built to sell in America's most popular price range.

1957 is the year that will "separate the builders from the boys." For Style-rite builder-dealers the prospects are exciting. The homes are exciting. And the sales are ready and waiting.

Will you cash in?

If you are east of the Mississippi and want the complete Style-rite story, pick up your 'phone and put in a collect call for W. L. Mainland, President. The number is HIckory 3-4656, Columbus, Ohio.





### MORTGAGE MARKET:

### FHA boosts interest to 5%; Congress fight looms on VA

Sagging house starts led the government to raise the FHA interest rate on home mortgages from 4½ to 5%, effective Dec. 4. But whether this will prod Congress to increase VA's frozen 4½% rate still looks questionable. Several key Democrats on housing committees immediately promised to fight any such move.

Said HHFAdministrator Albert M. Cole: "We cannot afford to let the vital housing portion of our economic life dwindle to a point that jeopardizes our

productive capacity and threatens the jobs of many thousands of people throughout the country working in the home build-

ing industry."



4% rate is fixed by law.

COLE

The FHA boost to 5% applies to Secs. 203, 220, 221 and 213 sales type projects. (For Sec. 203 (i) loans, it means borrowers will now pay 5½%, because 203 (i) carries an additional ½% service charge.) For Sec. 207 multi-family and 213 management projects, FHA increased its interest rate from 4¼ to 4½%. The new rates can be applied to all pending mortgages not yet finally indorsed for insurance by FHA. Capehart Act military housing is not affected. Its

Industry reaction to the long awaited move was not enthusiastic.

The comment of a Philadelphia builder was typical: "5% interest will help, but money is still going to be hard to get." NAHB called it "a step in the right direction."

Higher interest should wipe out most—but not all—of the big discount lenders had been requiring on FHAs. A 4½%, 25 year loan would have to sell at 95 to yield 5.01%. On a 20-year basis, a 4½% loan at 96 would yield 4.98. So mortgage men figure that 5% FHAs should go generally at a 2-point discount in the South and West; par or better in the Northeast.

Fears of temporary paralysis in the VA market may be exaggerated. If builders figure VA's rate will have to go up after Congress convenes, they can go ahead and plan to switch from FHA to VA before their homes are sold. On the other hand, Builder-Mortgage Broker Thomas P. Coogan says big volume builders—who rely almost entirely on VA—will stop building until the situation jells. Coogan predicts interest rates on conventional loans now will move up ½% "in sympathy with FHA's action."

Whether the administration can push a corresponding increase in VA interest through Congress seems to hinge on how it is tried.

If President Eisenhower intervenes personally by calling Congressional leaders in and asking their cooperation, chances are that the Democratic majority will not fight—not over a straight interest hike for VA, anyway.

But sentiment is strong among key housing legislators of both parties for an alternate scheme. Instead of raising VA's interest rate (which they contend might set off a general round of interest raises) they lean toward the Teague bill (June, News) to merge FHA and VA and liberalize terms to 2% down on \$10,000 sliding to 5% on \$16,000 and 15% on \$30,000. Olin Teague (D, Tex.), chairman of the house veterans committee, will hold the whip hand. He can (and probably will) say: "If you don't put my merger bill through, we'll never do anything about the VA program. If you do, an interest rate boost won't be necessary."

Flexible VA interest rates—rates set administratively within a broad range authorized by Congress, such as FHA now enjoys—are out. Congress will not vote them.

Over-all credit will continue tight for at least six months, perhaps a year. Prevailing administration feeling is that current restraints are absolutely necessary to control inflation.

### MORTGAGE BRIEFS

#### How much should rates go up?

How much must VA and FHA interest rise to bring out money in today's tight market?

Many a mortgage man thinks 5% will not be enough any more: the price of all kinds of money has risen too much. A boost to 5% is probably the most Congress will vote VA—and therefore probably the most FHA will boost its rate. But this will still mean discounts over most of the nation. Some expert opinions:

J. J. Braceland, vice pres., Philadelphia Saving Fund Society: a par market would require interest for FHA and VA about 2% above the yield on long-term government loans. "These are about 3% so 5.2% or 5.3% would be needed."

President Thomas P. Coogan of Housing Securities, Inc., New York: "Increase of interest rates will not materially help market."

Vice President William T. Doyle of Jay F. Zook, Inc., Cleveland: 5% would mean discounts; 5½% is more "realistic."

President Stanley M. Earp of Citizens Mortgage Corp., Detroit: "5% would help and we can't hope for it to go any higher," but it would still mean discounts.

Vice President Robert M. Morgan, Boston Five Cent Savings Bank: "5% won't bring out the money though the mortgage business would get a better cut of what there is."

President George W. DeFranceaux of Frederick W. Berens Inc., Washington: "You would still have discounts at 5% but at 51/4% you would probably have premiums on better loans on the East Coast."

Raymond H. Lapin, pres., Bankers Mortgage Co., San Francisco: "Even at 51/4% you might still have some discounts."

Everett Mattson, vice pres., T. J. Bettes Co., Houston: "The rate has to go to 5½%. 5¼% would help but it wouldn't create a par market and it wouldn't bring out an awful lot of new money."

Vice President C. A. Bacon, Mortgage Investments Co., Denver: "If there were a free, fluid interest rate, it would probably go right up to 5½% and then level off around 5%."

#### **FNMA** curbs buying

FNMA has acted to channel its dwindling funds into purchase of new mortgages.

Now, the government agency will buy only FHAs and VAs up to four months old. It had been buying acceptable

H&H staff

mortgages as old as Aug. 1, 1954. The order applies only to Fanny May's secondary market operations. Housing officials said banks have been dumping old mortgages on FNMA so fast that offerings to the agency had soared to more than \$60 million a week. At that rate, Fanny May funds would have been ex-



BAUGHMAN

exhausted about the end of January. The agency has less than \$450 million uncommitted.

The limitation, which should cut FNMA buying by a third, is no surprise. FNMA President J. Stanley Baughman had been announcing: "We can't continue to buy mortgages at the rate they are being submitted [so] we have to take steps." In the offing says Baughman, are two bigger questions: 1) should Congress boost FNMA's capitalization to increase its borrowing (and hence mortgage buying) power? and 2) "will the government put more Treasury money into it?"

### FHA Secs. 220, 221 beckon with takeouts at 971/2

Builders are missing a profit bet by not shifting more output into FHA Sec. 220 and 221 housing, federal mortgage men think.

Homes built under both sections (as well as military housing, housing for the elderly and for disaster victims) qualify for Fanny May special assistance. That means a price of 99 (less the agency's usual 11/2 point purchasing and marketing fee). Congress has fixed the price floor. But even at 971/2, a Sec. 220 mortgage commands a higher price in many states than a regular FHA Sec. 203.

Fanny May still has lots of money left in its special assistance fund. It has power to buy \$450 million of mortgages outright and to spend another \$100 million in 20% participations with private lenders. So far, it has issued commitments for only \$47 million. Moreover, no stock purchase is required.

### **FHA** mortgage prices drop another 0.2 point

Prices of FHA-insured mortgages were still falling in October-but not as fast as in September.

FHA says the average price was 96.5 Nov. 1, compared to 96.7 on Oct. 1 and 97.1 on Sept. 1. All regions of the US reported declines in October. These ranged from 0.1 point in the southeast and southwest to 0.2 in the middle Atlantic area and 0.4 in the northeast, north central and western areas.

Figures reflect the opinions of directors in FHA's 71 insuring offices, not actual sales.

#### OFFERING PRICES, FHA 203s Immediate Delivery

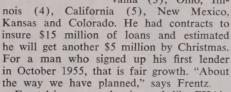
	Nov	. 1, 1956	Oct. 1	Sept.
ZONE	AVERAGE	RANGE	AVE	RAGE
Northeast	98.6	95 -par	99	99.5
Middle Atlantic	97.1	95.5-98.5	97.3	97.7
Southeast	96	94.8-97	96.1	96.7
North Central	96.2	95 -99	96.6	97
Southwest	96.4	95 -97.5	96.8	96.9
West	96.4	95 -97.5	96.8	97
United States	96.5	94.8-par	96.7	97.1

### Private insurance for home fixup loans? Ex-FHA aide sells plan in eight states

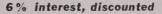
When FHA's Title I boss, Assistant Commissioner Arthur Frentz, left the govern-ment during the 1954 FHA investigations, he set out to prove something he had believed a long time; that private insurance of house modernization loans could become a big business. Frentz reasoned that

20 years of FHA's repair loan program had convinced lenders modernization is a good risk and that insurance of such loans is simple.

Last month, after two years of dogged work, Frentz' idea was beginning to catch on. He had signed up some 30 lending firms, mostly banks, in eight states-New Jersey, Pennsylvania (3), Ohio, Illi-



Frentz' insurance plan is much like FHA's. But he offers more flexible terms, rewards banks with low losses by reducing premiums, and cuts out so much red tape he says any sizable bank can do with one less employe in its loan department.



Frentz' lenders are not held down to 5% discount, as in FHA. Thus their money can earn more than the higher cost of private insurance. How a typical loan works:

On a three-year, \$1,000 modernization loan, the borrower actually signs up for \$1,195. It divides up this way: the basic \$1,000, the \$180 interest figured at 6%, \$15

City

for 36 months of credit life insurance. Figured into the whole loan, the credit life looks less formidable than it would if bought separately, as required by FHA. Monthly payments: \$33.20. The lender puts the loan on his schedule, pays Frentz an \$11.95 pre-

Frentz' "basic" insurance premium is 0.75%—the same as the one used by FHA for 18 years before FHA started two years ago to use co-insurance arrangements with banks. The change brought the government's insurance down to 0.65%—on the 90% of a repair loan FHA backs. The Frentz insurance covers 100%.

#### Premium depends on claims

But Frentz' minimum seldom applies at first. Frentz checks both the lender and the area, acting as "manager" for Old Republic Insurance Co. of Greensburg, Pa., which carries the insurance. (Old Republic, in turn, is reinsured with American Reinsurance Co. of New York. Frentz gets a management fee.) "We analyze the bank as to its lending personnel, its policies and experience," says Frentz. "We see whether it's a oneindustry town or diversified. We look at its history in FHA." Usually, Frentz is apt to set the insurance rate at about 1%, sometimes higher. After the lender has carried Frentz insurance for a year, his contract comes up for renegotiation. If the claims experience has been mild, the rate may go

Once he signs up a bank, Frentz uses all possible shortcuts to make paperwork simple. Instead of reporting each loan separately as in FHA, the bank simply fills out a schedule of loans at the end of each month on Frentz forms that list 22 loans per page. The bank figures its premium at the established rate, sends the schedule in with a check. When they arrive, the insurance is in force.

continued on p. 63; NEWS cont'd on p. 41

25 yr.

diate Future

### MORTGAGE MARKET QUOTATIONS (Sale by originating mortgagee, who retains servicing.) As reported to House & Home the week ending Nov. 16.

25 year,

FRENTZ

### FHA 4½s (Sec. 203) (b) Minimum down\* - Minimum down\* -

	30 year		25 year		10% down	
	Imme-		Imme-		Imme-	
City	diate	Future	diate	Future	diate	Future
Boston local	par-101d	par-101d	par-101d	par-101d	par-101d	par-101d
Out-of-state	94-95	94-95	95-96	95-96	95-96b	95-96b
Chicago	a	a	93-95b	93-95b	93-96b	93-97b
Cleveland	961/2	951/2b	97	951/2b	a	a
Denver	97b	961/2b	97b	961/2b	97-98bg	961/2-98bg
Detroit	95-96	95	961/2-971/2	961/2	971/2-981/2	971/2
Houston	951/2	a	961/2	a	961/2-97	a
Jacksonville	95-951/2	a	95-951/2	a	96-961/2	a
New York	97-99	97-99	97-99	97-99	.97-99	97-99
Philadelphia	96	96b	96	96b	97	a
San Francisco	a	a	a	a	C	a
Washington	971/2	97b	98	971/2b	98	971/2b

SOURCES: Boston, Robert M. Morgan, vice pres., Boston Five Cent Savings Bank; Chicago, Maurice A. Pollak, exec. vice pres., Draper & Kramer, Inc.; Cleveland, William T. Doyle, vice pres., Jay F. Zook, Inc.; Denver, C. A. Bacon, vice pres., Mortgage Investments Co.; Detroit, Stanley M. Earp, pres., Citizens Mortgage Corp.; Houston, Everett Mattson, vice pres., T. J. Bettes Co.; Jacksonville, George Dickerson, Stockton, Whatley, Davin & Co.; New York, John Halperin, pres., J. Halperin & Co.; Philadelphia, Laurence J. Stabler, vice pres., W. A. Clarke Mortgage Co.; San Francisco, Raymond H. Lapin, pres., Bankers Mortgage Co. of California; Washington, D. C., George W. De Franceaux, pres., Frederick W. Berens, Inc.

#### VA 41/25

30 year, 2% down 25 year, 5% down 10% down or more Immediate Future

Boston local	par 101db	par 101db	par 101db	par 101db	par 101db	par 101dl
Out-of-state	92e-95	94-95	92e-95	94-95	a	a
Chicago	a	a	93-95b	93-95b	93-96b	93-97b
Cleveland	941/2	931/2C	941/2	931/2C	97	961/2b
Denver	96b	96-961/2b	96-97b	96-97b	97-98b	97-98b
Detroit	941/2-951/2		951/2-961/2	951/2	961/2-971/2	961/2
Houston	94-95	a	941/2-951/2	a	961/2	a
Jacksonville	941/2-95	a	941/2-95	a	951/2-96	a
New York	97-99	97-99	97-99	97-99	97-99	97-99
Philadelphia	96	96b	96	96b	97	a
San Francisco	94f	a	94	ac	a	a
Washington	96	951/ab	97	961/2b	971/2	97b

- Immediate covers loans for delivery up to 3 months; future covers loans for delivery in 3 to 12 months.
- Quotations refer to prices in metropolitan areas; discounts may run slightly higher in surrounding small towns or rural zones
- Quotations refer to houses of typical average local quality with respect to design, location and construction.

Notes: a-no activity. b-very limited market. c-some money available @ 25% down, 15-year term. d-mostly at par with some talk of discounts. e-includes loans over \$15,000, thus ineligible for FNMA. f .- most loans going to FNMA, prices quoted are for private investors. g.-deals covered by prior allocation.

\$7% down on first \$9,000



Tell her you'll free her of garbage with In-Sink-Erator...

NO OTHER LOW-COST SALES FEATURE PACKS MORE PUNCH

THAN

In-Sink-Erator®



Details of proposed HLB changes were explained at press conference by (l to r) Consultant Edward Edwards, Ralph R. Crosby, Norman Strunk, J. Howard Edgerton.

#### US SAVINGS & LOAN LEAGUE CONVENTION:

### **Bankers feared seeking legislation** to 'clobber' S&L industry in 1957

"The No. 1 policy aim of the US Savings & Loan League in 1957 is to keep from getting clobbered."

The speaker: Norman Strunk, executive vice president of the League. His off the cuff remark at the League's November convention in Philadelphia was no idle jest. The S&L industry is running scared.

Commercial bankers are massing an all-out drive for legislation to knock the props from under the fast growing S&L business, its leaders are convinced. They fear the drive has support from high administration sources.

S&L leaders got the full impact of banker strategy as Sen. Willis Robertson (D, Va.), heading a committee studying revision of banking and credit laws, opened hearings in Washington. They were already disturbed because 20 members of a 27-man advisory committee are bankers and only two are S&L men. In Philadelphia they learned the worst. Recommendations to the Robertson committee for S&L law changes would not be made by a subcommittee headed by Henry Bubb, past president (1950) of the US League, but instead by the full 27-man committee. The implication: changes in S&L law could be decided by 20 bankers.

Bubb, already annoyed by HLBB suggestions to the Robertson committee that the board be given more regulatory authority, responded with a belligerent address before the US S&L convention.

Asserting that the league has always "bent over backward trying to avoid any alley fights," he warned that "the situation we face is potentially quite dangerous. . . . If we have to fight, I guarantee you we will fight hard and we will win." He also had harsh words for the American Bankers Assn. ABA, he charged, "has made at least a partial surrender to some of the anti-savings and loan extremists among its members."

Bubb was followed to the rostrum by W. Randolph Burgess, undersecretary of the treasury, ABA president in 1945 and ex-chairman of New York's National City Bank. Departing from his prepared text to reply to Bubb he said: "I can assure you that the administration will do all it can to see that savings and loan institutions get fair treatment."

Bankers' interpretation of fair treatment, as reflected in their comment and questions at Robertson committee hearings, was enough to horrify savings and loan men.

John J. McCloy, chairman of Chase Manhattan Bank, suggested to HLBB members that perhaps S&Ls should be "put under the same general restrictions applied to banks." Advisory Committee Chairman Kenton R. Cravens, president of Mercantile Trust Co. of St. Louis and former RFC Administrator, asked whether HLBB should be given regulatory power over dividend rates. HLBB Chairman Albert Robertson, who let board members Ira Dixon and William Hallahan do most of the talking, said that the rate question is a problem for Congress to decide. But Hallahan protested: "I question the desirability of blanketing the country with a set dividend rate."

### US League asks major changes in HLB system

Sweeping changes in the Home Loan Bank system and reorganization of the Home Loan Bank Board itself have been recommended by the US Savings & Loan League.

Major points: higher liquidity requirements, long term (10-year) advances to member associations and a beefing-up and expansion of the Home Loan Bank Board to give it prestige comparable to that of the Federal Reserve Board.

The league had two committees working a year on the plans. A 13-man committee headed by Ralph R. Crosby of Providence, R.I., former (1954) president of the League produced the report on the bank system, aided by three paid consultants. A committee of past presidents developed the plan for reorganizing the HLBB.

Both plans were ratified by the convention and sent to the HLBB and the Senate banking committee, which is studying a major overhaul of the nation's banking laws. The subcommittee already has proposals from the HLBB (calling for more regulatory powers), and an 18-point plan from the Natl. Savings & Loan League (Nov. News)

The recommendations of the rival S&L leagues are similar in some respects, conflicting in others. Items:

Both asked for a higher liquidity ratio but the US League suggested a higher rate with a more complex formula.

Doth asked an end to selective credit controls on housing but the US League said that any controls imposed should apply to VA and FHA and FNMA.

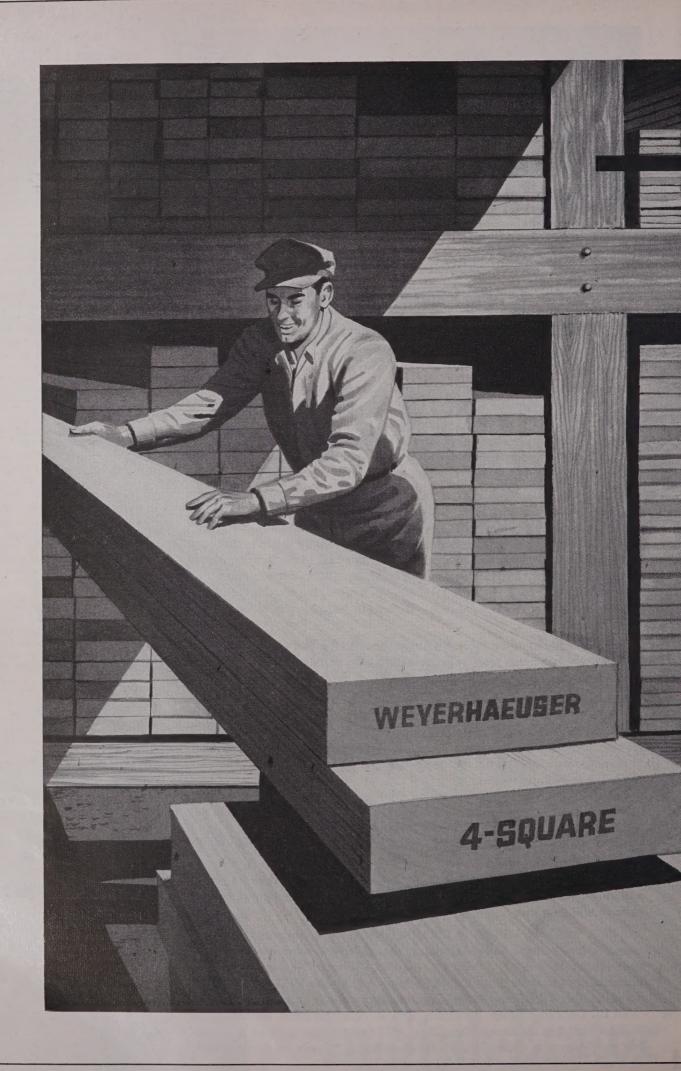
▶ Both would like an easier way for S&Ls to borrow money—though the US League proposes a new lending plan for Home Loan Banks while the Natl. League proposes that S&Ls be allowed to borrow on a contractual basis from pension or similar funds.

HLBB Chairman Albert J. Robertson was on the platform at the US League convention when proposed changes in the bank system were outlined. He said afterward that they sounded reasonable. But HLBB Member Ira Dixon, noting that the league claimed all changes but one could be accomplished withcontinued on p. 45

Vince Finnigan



New president of the US Savings & Loan League is Roy M. Marr (r) of Memphis, Tenn. He succeeds Walter M. Dreier (l) of Evansville, Ind. Marr, president of the Leader Federal S&L Ind. Marr, president of the Leader Federal S&L of Memphis, (\$80 million assets), has been in the S&L business since 1941. An ex-railroad man, he was president of the Memphis Union Station Co, and terminal manager for the Louisville and Nashville, RR. In contrast to the bouncy and talkative Dreier, Marr is quiet and easygoing. Hobbies: golf and fishing. He considers 1957 a year for most S&Ls to build their reserve strength aiming for "a big fat liquidity." reserve strength, aiming for "a big fat liquidity ratio" in the 60's when housing demand again turns upward.



out more legislation, was skeptical. Dixon, former clerk of the Senate banking committee, said he would hesitate at such major moves without legislative direction.

Details of the US League plan:

Liquidity. S&Ls can not always count on a large inflow of savings to maintain liquidity. So liquidity requirements for local associations should be increased over the 6% of savings now required. Specifically, member associations should be required to hold in cash and government obligations for 12 months preceding use of credit, an average of the sum of the following: half the gross cash withdrawals of the association during the preceding 12 months or 15% of savings capital, whichever is smaller plus an amount equal to all advances from the Home Loan Bank or other borrowed money due within three months plus an amount equal to loans in process and legal commitments to make or buy mortgage loans to the extent that loans-in-process and commitments are in excess of 10% of savings and are not protected by unused commitments to borrow from the HLBB, take-out commitments from other financial institutions or confirmed lines of credit from commercial banks.

S&Ls which fail to maintain this liquidity would face a penalty interest rate when they borrow and be limited to a 90-day loan.

(S&L men admitted concern about the low reserves of some S&Ls. They predicted higher reserves will discourage associations from offering abnormally high dividend rates.)

Home Loan Banks should maintain quarter holdings of cash and government bonds to meet emergency liquidity needs of members. Total liquidity of each bank should equal: obligations maturing within 30 days, total demand deposits of members, 75% of time deposits, 50% of capital stock and 50% of outstanding undisbursed commitments.

Home Loan Bank Lending. Regular advances, arranged by commitment 60 days before funds are obtained by paying a commitment fee, should have maturities up to 18 months for short-term and up to 10 years for long-term amortized borrowing. Special advances, available on request but with a higher rate than regular advances, should have maturities of 90 days or longer.

The short-term regular advance, the committee reasons, would be for seasonal purposes—so a local association could plan in advance for periods of heavy disbursal. The long-term advance would be for associations in rapid growth areas with historic shortages of mortgage money. (Though empowered by law to make long-term advances, the Home Loan Bank has made none longer than ten months in the last five years.)

Bank Financing Practices. The Home Loan Bank should sell its obligations more aggressively. Short- and long-term obligations should be sold frequently to improve the market for them. Most important, the HLBB should ask legislation to allow the Federal Reserve Banks to rediscount Home Loan Bank obligations—in effect monetizing them.

The HLBB reorganization plan was prepared by a committee of US League past presidents, headed by J. Howard Edgerton of Los Angeles. It reaffirms the league's stand against separation of the Federal S&L Insurance Corp. from the HLBB, asks instead that HLBB administrative authority be divided into four divisions: S&L, Home Loan Bank, S&L Insurance Corp. and Supervision and Examination. This would free the board for "policy making."

A "highly-paid" governor should direct each division and the entire staff of the Home Loan Bank Board should be greatly expanded, the league said. . .

### US S&L League applauds drop in FHA-VA starts

The down trend in FHA and VA housing was cheered at the US Savings & Loan League's Philadelphia convention.

In two resolutions, the league expressed satisfaction with the trend toward conventional financing and warned against further federal financial aid to housing.

"After many years of emphasis on government-assisted home mortgage credit," one resolution said, "the shelter industry has turned to a type of loan which is immediately responsive to new conditions in the money market. The home building industry has been saved from calamity by the availability of mortgage money on conventional loan terms."

(Left unsaid was the fact that most S&Ls are currently charging 5½ to 6% on prime mortgage loans, because of tight money.)

The other resolution cautioned that there will be increasing pressure to use federal and local funds to finance housing for special groups, such as middle-income families and the elderly. Such efforts "pose the grave threat of weakening and eventually destroying the private home-mortgage lending system," said the league.

Rep. Brent Spence, (D, Ky.), chairman of the House banking committee, indirectly as-

sured the league that he will oppose any expansion of federal aid to housing. Asked what he thought of the Teague bill to liberalize FHA down payment terms, Spence said: "I don't believe I'd like any liberalization of FHA. It's liberal enough now." Spence also promised to introduce a bill next year to ban S&L holding



PENCE

companies. (He sponsored a similar measure in the past session but it did not pass.) Other convention developments:

Only 75 S&L men turned out to hear a panel discussion on "The Government's Role in Home Financing" with top officials of HHFA, FHA, VA and FNMA taking part. Several hundred showed up at each of three other panels held concurrently on management subjects.

A top man in the Los Angeles S&L business predicted that many S&Ls there will drop dividend rates from 4% to 3½ or 3¾% Jan. 1.

# Election weakens conservative element in Congress; outlook: more 'welfare'

As Sen. Barry Goldwater (R, Ariz.) noted in a talk to realtors conventioning in St. Louis (see p. 73), "the conservative element of the Senate was weakened by the election."

What does that mean for housing?

It means the industry will be dealing, in both Senate and House, with men whose concept of a free market in mortgages is growing cloudier and cloudier. The idea that interest can, by legislative edict, be what legislators think it ought to be, will be a little stronger. Confidence that market processes will better benefit the general welfare than government manipulations will be a little weaker.

The industry can expect a flood of proposals to circumvent the government's credit policy or substitute direct loans for private loans. It will include a drive for more public housing. More dangerous, it will include efforts (like middle-income housing) for legislation affecting gray zones—neither distinctly public nor wholly private housing. Such legislation always has some good purpose. It is to overcome a deficiency, temporary or chronic. The danger is that it will create more impediments for private housing and thus serve to generate demand for more laws of the same kind. Specifically:

It's certain that such administration-supported programs as college housing, a limited amount of public housing and military housing will continue despite opposition from right wing Republicans and some industry groups.

Democrats are expected to trot out a program for more aid to rental housing, including middle-income housing. With a two-year program of 35,000 units per year approved this year, public housing probably will not be a hot issue again until 1958.

HHFA and FHA brass are groping for plans to put more emphasis on moderate priced housing to forestall Democratic legislative efforts.

Leadership of the Congressional committees handling housing remains unchanged. Sen. John Sparkman (D, Ala.) will head the Senate housing subcommittee. Rep. Brent Spence (D, Ky.) will remain chairman of the House banking committee. Among the missing will be Rep. Jesse Wolcott (R, Mich.), most effective conservative in housing policy since Sen. Taft, and Sen. Herbert Lehman (D, N.Y.) who plugged hard for big public, middle-income and other welfare housing programs. Both retired.

Other election results affecting housing:

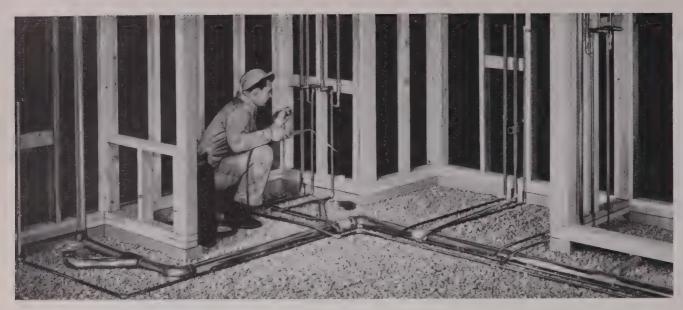
▶ Voters set a new record by approving \$2.5 billion in bond issues—most of it for schools, highways, airports and other public works. Much of the work promises to open areas for housing.

New York State voters defeated a \$100 million bond issue to loan private contractors funds to build middle-income housing for a limited profit.

With support of all New York City newspapers the issue carried the city but it lost heavily upstate—apparently as a result of opposition from the New York Chamber of Commerce and the Real Estate Board of New York. Both said the program would give unfair tax benefits to apartment owners at the expense of other taxpayers. Moreover, resentment against public housing programs is growing in upstate New York. The subsidy features of the middle income measure cost it votes. New York voters did approve a \$500 million bond issue for highway construction.

California voters overwhelmingly approved a \$500 million bond issue for veterans' home loans — another extension of a program, started in 1921, under which the state makes give-away 3%, 20-year mortgage loans. This will be a bonanza for builders in the nation's biggest market. The California legislature earlier this year raised the cost limit per home from \$8,500 to \$15,000, leading to predictions that the program will do as much business in the next five years as it has in the past 35. (California voters rejected a constitutional amendment backed chiefly by the AIA to let the state farm out design work to architects.)

NEWS continued on p. 48



### Beginning of a better Bathroom...



Colorful new style note: Bathroom accessories of gleaming, golden brass!

### Chase Copper Water Tube and Drainage Lines

Chase & COPPER CO. WATERBURY 20, CONNECTICUT

SUBSIDIARY OF KENNECOTT COPPER CORPORATION

The Nation's Headquarters for Brass, Copper and Stainless Stee
Atlanta Cincinnati Grand Rapids Milwaukee Philadelphia
Baltimore Cleveland Houston Minneapolis Pittsburgh
Boston Dallas Indianapolis Newark Providence
Charlotte Denver Kansas City, Mo. New Orleans Rochester
Chicago Detroit Los Angeles New York St. Louis
San Francisco Seattle Waterbury

It's a better bathroom for *everybody* when you use Chase copper tube for water supply and drainage lines.

Architects, builders and contractors find they can plan a more compact installation, meet budget and time restrictions—because Chase copper tube and solder joint fittings can be installed faster. Copper drainage DWV tube fits within partitions—

eliminates expensive "furring out."

Plumbers do the work with less fatigue. For Chase copper tube is lighter in weight, easier to handle, requires fewer joints. The use of copper saves time and material and does a better job.

Insist on Chase copper water tube and DWV copper drainage tube!

### FREE! Plumber's Display Card!

Ask your wholesaler or write to Chase for a counter display card of this advertisement in full color as it appeared in the Saturday Evening Post and Better Homes & Gardens magazines!

the newest outstanding Grant product development





### A REAL DOOR THAT FOLDS!

styled by Paul McCobb





### features

**Solid Panels:** The solid panel construction of this Grant door is a revolutionary development in a folding door at moderate price. The *Grant Folding Door* has crisp, clean lines, blocks sound, hangs rigid without billows or rustle. Knock on it. It sounds and feels like a door.

**Space Saving:** Frees an average of 14 square feet of floor space (19 square feet of wall space) for living space, better arrangement of furnishings.

Durable — Easy to Maintain: Vinyl surface can be wiped with a damp cloth—scrubbed if necessary. Tough and longwearing, resists scuffing, color is permanent.

**Easy Installation:** Only a screwdriver is needed to install the *Grant Folding Door* in standard door openings in minutes. Readily adaptable to non-standard openings.

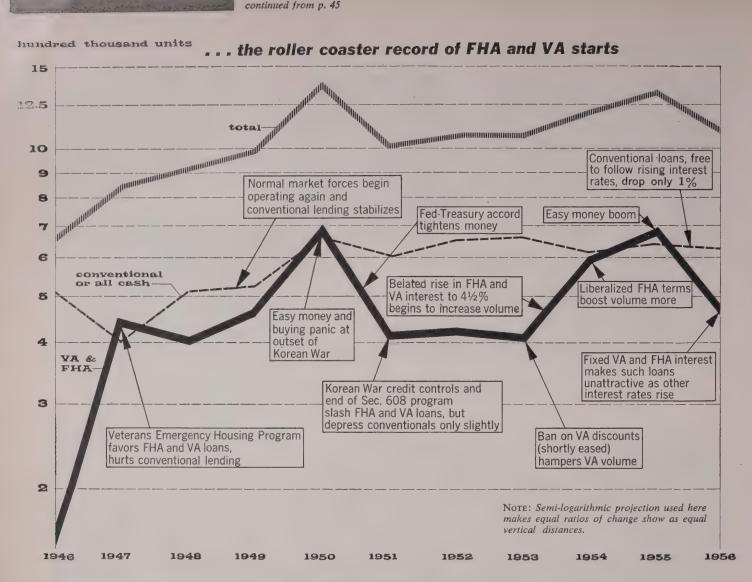
**Decorative Flexibility:** Color styled to harmonize with modern or traditional furnishings. Attractive design of handles, track and other details, also specially styled by famous Paul McCobb.

Ask for your copy of fully descriptive specifications booklet, the swatch book showing the attractive colors available and texture of the non-scuffing vinyl finish.

Grant folding door

Grant Pulley and Hardware Corporation 31-79 Whitestone Pkwy., Flushing 54, N.Y. 944 Long Beach Avenue, Los Angeles 31, Calif.

Other Grant Products: Sliding Door Hardware • Drawer Slides Drapery Hardware • Sliding Door Pocket Frames Sheaves and Tracks • Pulls • Industrial Slides



### How government has unstabilized the new house market

For 10 years, FHA and VA mortgage programs—contrary to the principles set forth in the Full Employment Act of 1946 and the Housing Act of 1949—have been a disruptive rather than a stabilizing influence on home building.

What stability there is in housing has come from conventional mortgage lending. The free-market area is unaffected by politically frozen interest rates, welfare-tinged manipulation and credit controls like Reg. X.

Since 1950, starts financed with conventional loans or all cash have maintained a steady pace. FHA and VA starts have been on a roller coaster. FHA's and VA's mortgage programs have brought home ownerhip to millions of people who might not otherwise have been able to afford it. But this has been done at the cost of such gyrations for the industry that "crisis" is now a commonplace word.

In short, government management of half of new housing has defeated some of its own aims. The record should be an eyeopener to many an administration official. Indeed, when one of Washington's top money managers was shown these figures, prepared by Economist Miles Colean, he confessed surprise. The record in detail:

In 1946 and 1947, priorities under the Veterans Emergency Housing Program strongly favored FHA and VA loans and depressed conventional lending. Result: FHA and VA activities zoomed 189% while conventional loans plunged 19%—their deepest drop in the postwar years.

Since normal market forces began to operate in 1948, conventional lending has varied from year to year no more than 27% up or 9% down. The biggest bump—a 9% drop—resulted from combined credit and materials controls during the Korean War. But it was minor compared to the 40% plunge in FHA and VA starts.

As the chart at the top of the page shows, Reg. X restraint plus the tightening of credit that followed the Treasury Federal Reserve accord in 1951 held FHA-VA starts in 1952 to a very slight (2%) increase, while despite these forces, conventional and cash starts took a 6% lead over their level the previous year.

The combination of a relaxed interest rate in 1953 followed by a generally easier credit situation produced a whopping gain in FHA and VA starts in 1954 (43%) and '55 (15% more). This year, with their unreal 41/2 % interest rate, FHA and VA starts will apparently be off 30%. But conventional and all-cash starts will drop only 1%.

FHA and VA have also been at the mercy of shifting legislation and administrative rules. When Sec. 608 was shut down in 1950, FHA virtually stopped making loans on rental property. The FHA investigations of 1954 crippled some segments of its program. Other shifts have blown alternately hot and cold: the ban on VA discounts in 1953, its partial removal later, easing of FHA terms in the 1954 Housing Act.

But changes in the money market which FHA and VA could not follow are more important. Here are the figures:

TOTAL PRIVATE STARTS, 1946-56 (in thousands of units)

	A O TIED A MITTIEL	01/11/12/09	27 10 50	(111 1110110111		,
		%		%	Conven-	%
		Change		Change	tional	Change
		year to	FHA	year to	or all	year to
Year	Total	year	& VA	year	cash	year
1946	662.5		152.4		510.1	
1947	845.6	28%	439.7	189%	405.9	-19%
1948	913.5	8	401.9	-8	511.6	26
1949	988.8	8	464.7	16	524.1	2
1950	1,352.2	37	686.7	48	665.5	27
1951	1,020.1	-25	412.1	-40	608.0	-9
1952	1,068.5	5	421.3	2	647.2	. 6
1953	1,068.3	*	408.6	-3	659.7	2
1954	1,201.7	12	583.3	43	618.4	6
1955	1,309.5	9	668.9	15	640.6	4
1956	1,100.01	-16	467.41	-30	632.6 <sup>1</sup>	-1
* 7 000	s than 1%					

<sup>1</sup> Estimate based on first 9 months.

NEWS continued on p. 51

	#		‡ []]]]]]		
	Less than 800 sq. ft.	800 to 999 sq. ft.	1,000 to 1,199 sq. ft.	1,200 to 1,499 sq. ft.	1,500 sq. ft. and over
1954	17%	20%	27%	21%	15%
1955	6%	22%	32%	26%	12%
1956	4%	15%	33%	27%	19%

More big homes, fewer small homes are being built in US metropolitan areas, according to BLS housing characteristics study. Percentage of homes with less than 1000 sq. ft. has dropped 9% per year since 1954 while number with more than 1,000 sq. ft. went up 7% in 1955 and 9% in 1956.

### '56 met-area homes bigger (7%), costlier (10%) than '55

The typical new American home is continuing to get bigger and costlier.

This year, it got 7% bigger (from 1,170 sq. ft. to 1,250 sq. ft.) and 10% more expensive (from \$13,800 to \$15,200). On top of the increase from 1954 to 1955 (2.5% bigger and 7% costlier), the typical US house now costs \$2,300 more and has 110 more sq. ft. than it did in the first quarter of 1954.

This is the report of the Bureau of Labor Statistics after its annual first quarter survey of housing characteristics.

The Producers Council raised \$43,750 of the \$48,000 contributed to BLS by private industry for the survey. It covered a big sample of all the nonfarm dwelling units started in the first three months of the year. But the figures quoted here (except where noted) apply only to houses in metropolitan areas, because 76% of the first quarter's estimated 244,300 starts were in the nation's 168 metropolitan areas.

Builders are starting more big homes, fewer small homes (see table at the top of

As a result of this trend one bedroom homes have virtually disappeared from the market. Number of new four bedroom homes has nearly doubled since 1954.

	Number	OF	BEDROOMS	*	
Year		1	2	3	4
1954		2.1	32.4	57.8	4.6
1955		.8	22.4	68.1	5.9
		0	15	74	9

\*Annual percentage totals may not be 100% due to a small number of unknown units.

The one-bath home still far outnumbers a one-and-a-half or two-bath home—notably in the North Central area which has nearly twice as many one-bath homes as the West. The West has by far the most new two-bath homes—41%. Sadly, 3% of new homes in non-met areas still have no bath.

#### Number of Baths

				272 01	
Area	1	11/2	2	more	None
Met	43	20	24	6	1
Non-met	62	11	20	. 3	3
N'east	43	17	25	14	0
N'Central	58	29	7	4	. 1
South	54	13	21	6	2
West	31	21	41	5	1

Despite all the talk about split-levels, only 7% of 1956 metropolitan area homes were splits, and 85% were one-story, 5% two-story. One-story construction was noted in 89% or more of the homes started in North Central, South and East sections but only 59% in the Northeast where two-story homes accounted for 10% and split-levels 25%.

Basements were more common in 1956 homes—47% having full or partial cellar, compared with 44.7% in 1955 and 41.1% in 1954. Of homes without basements, 15% were on slabs, 36% had crawl space in 1956 compared to 16.2% slab and 37.6% crawl space in 1955.

Higher prices due partly to bigger homes and partly to higher building costs, were universal (see graph below):

The 1956 median price of \$15,200 is only so low because it was dragged down by the

\$12,800 average selling price in the low-cost South.

#### MEDIAN SELLING PRICE

Year	Met-Areas	N'east	N. Central	South	West
1954	\$12,900	\$13,800	\$13,100	\$10,800	\$12,600
1955	\$13,800	\$14,400	\$14,700	\$11,800	\$14,100
1956	\$15,200	\$16,100	\$16,200	\$12,800	\$15,000

Heavy emphasis on lower priced homes is responsible for the South's low median price—only 12% of its homes being built at \$20,000 or over but 28% \$10,000 and under.

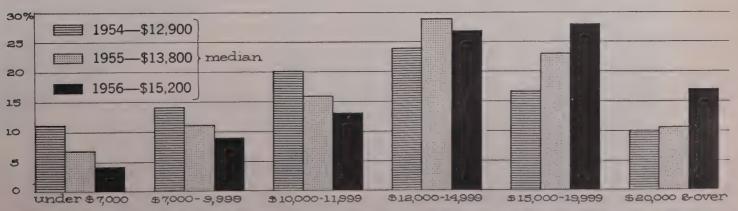
195	56 SE	LLING	PRICES		
Price	Met N	V'east	N.Cntrl	South	West
Less than \$7,000	2%	0%	2%	9%	1%
\$7,000-\$9,999	9%	4%	6%	19%	3%
\$10,000-\$11,999	11%	10%	13%	14%	13%
\$12,000-\$14,999	26%	28%	21%	25%	33%
\$15,000-\$19,999	29%	35%	30%	18%	33%
\$20,000 & over	20%	21%	26%	12%	15%

Masonry homes gained very slightly this year at the expense of frame. The proportion was 79% frame and 20% masonry compared to a split of 78.8 to 19.3 in 1955 and 81.8 to 15 in 1954.

Drywall and plaster walls were about even in 1956 homes (50% drywall to 48% plaster) with drywall most common in the Northeast and South.

On prefabs, BLS may have slipped. Prefabbers own figures give them 7% of 1956 starts. The BLS study shows only 1% of homes in metropolitan areas prefabricated.

continued on p. 55



More expensive homes, fewer cheap homes, because of higher costs and construction of bigger homes in metropolitan areas, has shifted heaviest concentration of homes from the \$12,000 to \$14,999 bracket of 1954 to the \$15,000 and \$19,999 bracket.

Gain Minimum Labor Cost...

and Maximum Consumer Acceptance

### ...with BILT-WELL



Manufactured by CARR, ADAMS & COLLIER COMPANY, Dubuque, Iowa (Established 1866)

St. Petersburg Times

The error might well be a consequence of making the study in the first quarter—when winter slows building in the North Central states where prefabbing is strongest.

Effect of the package mortgage to buy appliances and equipment with the new home was also clearly shown in the 1956 study:

HOMES WITH EQUIPMENT IN SELLING PRICE

			N.		
Item ·	Met	N'east	Central	South	West
Stove, gas	16%	24%	5%	8%	25%
Stove, electric.	21%	49%	21%	16%	11%
Refrig	6%	8%	4%	7%	3%
Dish washer	13%	14%	8%	12%	9%
Sink disposal	40%	3%	37%	14%	67%
Incnratr. dspsl.	3%	0%	. 3%	1%	4%
Exhaust fan	59%	81%	58%	34%	68%
Freezer	1%	1%	1%	1%	1%
Washer	3%	4%	5%	2%	2%
Attic fan	3%	2%	2%	11%	2%

▶ Fireplaces are becoming more common. 33% of homes got them this year vs. 29.4% in 1955. They are most common in the Northeast (55%) and in the West (53%). ▶ Eighty-eight per cent of all homes now have warm air heating but 12% of the 88% are no duct space heaters. Only 6% of the homes have air conditioning.

Garages were built with 56% of the 1956 homes, carports with 12% but 29% have neither.

One unhappy result of BLS' agreement with the Producers Council to finance this study has been a Budget Bureau rejection of an appropriation to make the same study next year. The bureau's argument: why should the government pay for the research if private industry will?

### Appraisers urged to push builders for better homes

Real estate appraisers are being urged by their national president to put "economic pressure" on builders to raise the standards of their homes.

Says Victor R. Lundy of the Society of Residential Appraisers: "A more or less cursory inspection of housing built last year reveals that some of it is worth less than the cost of producing it, and was so on the day of its completion.

"The reason that such housing was not, by necessity, actually disposed of at a loss is that price was not the determining factor, but, rather, terms of sale. How much down and how much a month? These were primary market considerations. Price was secondary. Price was supported by terms. Built-in defects, which would otherwise have been rejected or discounted by the market, remained largely unnoticed behind the diaphanous cloud of easy financing."

Lundy cited such items as these:

▶ The \$20 saved by using a 30-gal, water heater instead of the 40-gal, heater demanded by automatic dishwashers.

Three-bedroom homes with only one bath.

A window placed over the bathtub.

▶ Rooms the wrong size and shape to accommodate the furniture they normally should

"The appraiser has no direct control over housing which is to be built," Lundy told a SRA conference in Milwaukee, "but by the very nature of his job, he has a potent word in the decision of how much money is to be loaned upon it. . . . No builder can for long resist the economic pressure which results from loan commitments which are less than maximum. The realization that he is suffering a penalty for lack of proper planning is more effective than any other argument."



A three point program for personnel development was outlined for PHMI by George A. Cowee (1) National Homes' vice president for sales. With him following the talk are (1 to r): Richard N. Jones. House & Home advertising director; W. B. F. Hall, chairman of the PHMI mortgage financing committee; and Frank P. Flynn, executive vice president of National Homes Acceptance Corp.

### PHMI CONVENTION:

# Prefabbers see FHA-VA interest rate hike as only hope for better sales

Prefabricators, whose business has been hurt badly by the shortage of FHA and VA mortgage money, looked glumly at their 1956 sales record last month and agreed that only an interest rate hike could really help them.

Meeting in St. Petersburg, the Prefabricated Home Manufacturers Institute noted sadly that sales are off 25% from 1955. Instead of 100,000 units hoped for—10% of all starts—they are ready to settle for 70,000 units—6% of this year's expected 1.1 million tests.

At least two prefabbers have tried to stimulate sales by price cutting. Inland Homes of Piqua, O. reduced prices an average of 3% on all of its 14 models. Midwest Homes, Inc. of Mansfield, O. trimmed 2½% from the price of some of its 35 models.

President E. E. Kurtz of Inland said his firm was able to reduce prices because of increased efficiency in production methods and reduced lumber prices—more than offsetting higher prices for labor, roofing, windows and gypsum. President John L. Morley of Midwest also credited lower lumber costs for the price cut.

Other prefabbers reported more emphasis on higher cost homes—financed more through

St. Petersburg Times



New manager of PHMI, Conrad (Pat) Harness (r) confers during a program break with PHMI President George E. Price.

conventional loans rather than FHA or VA—and addition of such prefab buildings as churches to the basic line.

Except for Inland and Midwest, the consensus among prefabbers is that prices are headed up. National Homes is boosting prices 1½% Jan. 1. Pease Woodworking Co. of Hamilton, O. held the price line on some 1957 models, but increased several.

The only consolation the prefabbers took in the FHA-VA picture was a report from PHMI President George E. Price: "Though FHA and VA starts are down 31% this year, our members have been able to keep within 22% of last year's volume. Thus we are getting a larger share of the FHA and VA volume of housing which is our primary market."

But Price called the drop in FHA-VA activity "a national tragedy." He cried: "What Dr. Arthur F. Burns, chairman of the President's Council of Economic Advisers, not so long ago called one of the great reforms of our time is fast losing its impact as a force for social and economic good." Price's remedy: a flexible FHA and VA interest rate—already endorsed by realtors, mortgage bankers and lumbermen.

Other convention notes:

▶ James Downs Jr., chairman of Real Estate Research Corp. of Chicago, urged the prefabbers to regard "land converting" as their true business. Instead of hunting for money exclusively he suggested they "convert the guy who isn't a dealer but who has land and capital and get him to go into your business."

Richard N. Jones, House & Home's advertising director, urged PHMI to develop much more accurate statistics on prefab production by hiring outside accountants to compile the data, thus allowing Prefab Macy's to avoid telling Gimbel's but still providing reliable industry-wide reports. Jones also urged prefabbers to form a producers affiliate to help educate materials makers to prefab needs—and vice versa.

Rep. Albert Rains (D, Ala.), chairman of the House subcommittee on housing, saw the

continued on p. 59

# now...lath and plaster

when you build with the

Three Keys to Stronger Plaster

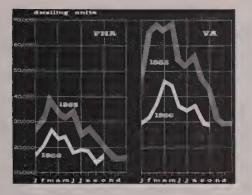
KEYMESH·KEYCORNER·KEYBEAD



one-third fringe or outlaw class of mortgage (i.e.—conventional lending)," he said: "I would like to see all mortgage credit have some type of federal stabilizing influence so we can allot money where it should go."

Rains said he does not regard an interest rate hike as the only way to get more money for FHA-VA loans, commented: "I get tired of being told that the price of money is made in the open market. Uncle Sam sets the price of money."

Both FHA and VA need a complete reorganization, said Rains. "Without FHA and VA you would be out of business and so would the majority of home builders."



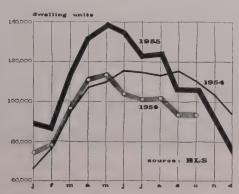
### FHA applications pick up but VAs continue to fall

VA appraisal requests continued to fall in October but a 30% jump in FHA applications more than offset it. The two indexes are the best available hint of what will happen to housing starts in the months just ahead.

VA appraisal requests on new units totaled 29,678 down 329 from September. For the year so far, VA requests are off 36% from their 1955 pace and they were 31% below the October '55 level

FHA applications on new units totaled 18,181 in October (13,270 individual homes, 4,911 for projects).

Nearly half the project applications involved Sec. 213 co-operatives, apparently reflecting increased interest in co-ops in New York City. For the year so far, FHA applications are down 30% from 1955. Applications on existing units (not graphed) are off 20%.



### Housing heads for 1.1 million starts—or close to it

Housing starts in October remained at the same 93,000 level as in September. But 90,800 were private starts in October, an improvement over September's 89,900. Except for September, the October seasonally adjusted annual rate for private starts is the lowest since December 1953. For the year so far, total starts are off 16% and private starts are down 17%.

Almost all the drop is in FHA's and VA's.

Almost all the drop is in FHA's and VA's. Last year, the two government-backed programs accounted for 586,138 starts in the first ten months; this year they have plunged 31% to 406.265.

If 1956 is to bring 1.1 million starts, the industry will have to average 74,950 in November and December. The combination of tight money and a wait-and-see attitude because of a possible boost in FHA and VA interest may prevent it.

### Housing outlook for 1957

Next year's total starts will depend on how fast builders can step up production when FHA and VA interest is raised, but 1,150,000 total is unlikely

Chances that 1957 will see more than about 1.1 million new housing starts now seem to hinge on two things:

- **1.** How fast can home builders move to take advantage of higher interest rates on FHA and VA loans, when they come?
  - 2. How soon will the rate of savings begin to rise again?

Any general easing of tight money is not in prospect for months to come. Because of this, and because FHA and VA interest rates have been held down to unnatural levels so long already, private housing is bound to start slowly in 1957. For three or four months, the annual rate of private starts will probably hover around 1 million.

The rate may go up in the second quarter. And such an improvement could still carry the year's total above the 1.1 million mark. But House & Home's consulting economist, Miles Colean, says it now seems less likely than it did two months ago (Colean forecast, H&H, Oct., p. 212) that next year will see as much as 1,150,000 private housing starts. His current forecast for this year is now "about 1.1 million."

Except for the F. W. Dodge Corp.'s estimates of residential contract awards, which rose in August and September the preceding comparable months for the first time this year, all housing indicators still point down. And Dodge estimates for October confirm this trend.

### Housing industry leaders make '57 start predictions

The annual forecasting season brought forth these prophecies for home building in 1957:

Commerce & Labor Depts.: "About 1 million new *private* nonfarm dwelling units," with a dollar volume of \$12.7 billion—a 5% drop from this year's anticipated total of \$13.4 billion. For public housing (including Capehart Act military housing), the government forecast a 64% gain in 1957, from \$275 million to \$450 million. For all construction, it predicted a 5% increase, from \$44 billion to \$46½ billion.

FHA Commissioner Norman P. Mason: 1.1 to 1.2 million new homes.

President Clarence M. Turley of NAREB: "Between 900,000 and 1,000,000 due to the mortgage market."

Ralph H. Stone, VA director of benefits (who predicted gloomily that 1956 would bring only 1,000,000 starts): less than a million starts.

VA's **Tom Sweeney,** loan guaranty chief: 1 million to 1.1 million starts.

President Walter H. Dreier of the US Savings & Loan League: between 1 million and 1.1 million units. "The worst of the decline in new home building is behind us."

Thomas Holden, vice chairman of F. W. Dodge Corp.: 1,125,000 starts, no increase in total floor area of residential building but a 6% rise in residential dollar volume. Dodge predicts a "slightly smaller average house next year."

NAHB President Joseph B. Haverstick: "8% less than 1956 or slightly over 1 million starts." Also: 1957 will be "the most competitive year since the '30s."

Hal Braman, executive manager of the Natl. S&L League: a leveling off after 1,050,000 starts this year.

### Webb & Knapp announces land development plans

Webb & Knapp the giant New York real estate firm headed by William Zeckendorf, is going into the nationwide land development business.

Zeckendorf has formed a new corporation, Webb & Knapp Communities, named Housing Expert (and House & Home consultant)

Dave Slipher president.

The new firm has already acquired tracts in Los Angeles (11,604 acres), Dallas-Ft. Worth (6,300 acres) and New Orleans (33,000 acres). Planning experts are preparing master plans to include both residential and industrial sections.

Zeckendorf has also acquired the 2,287-acre Belair ranch near Washington from the estate of the late William Woodward but is not definitely committed to including it in the community development plans. Negotiations are underway for one more large tract in the Southwest and Zeckendorf agents are studying other possible sites. Main consideration: the site must be large and in a rapid growth area. Development of the communities is scheduled to start now but Slipher emphasized the firm is really aiming at the housing boom due in the 60's.

Though Zeckendorf's original idea was for Webb & Knapp to build homes, too, this was abandoned. "It seemed more logical to acquire huge tracts of land now for extensive development in the 60's, plan and subdivide and let local builders put up the houses," says Slipher.

Webb & Knapp, tentatively plans to retain local architects to design homes for each of the developments—sell lots and plans to participating local builders (probably four to six builders in each community. But Slipher noted that this procedure will vary from community to community. He explained that Webb & Knapp has local partners in each project.

NEWS continued on p. 63



# DAYTON BUILDER ...ALL EQUIPPED AND REPUBLIC

Pictured above are Charles H. Huber, Secretary-Treasurer, and Donald Huber, Executive Vice President of the H. C. Huber Construction Company, builders of Dayton's Modern Manor.

Aerial view shows extent of huge new Dayton community, Modern Manor. Here you see approximately 2200 homes, each featuring Truscon Steel Doors and Republic Steel Kitchens.

Value-loaded Huber Homes sell at the rate of 1000 per year. The company now is expanding its operations into other Ohio communities.

# REPUBLIC



REPUBLIC World's Widest Range of Standard Steels

### MARKET BRIEFS

### Why houses aren't selling

One reason houses aren't selling may be that they aren't being sold.

Kenneth Richardson, real estate consultant and realtor at Walnut Creek, Calif. in the San Francisco suburbs hired two market analysts to pose as buyers at 100 tracts. Results, as reported by Frederick C. Kracke, executive vice president of the Genl. Contractors Assn. of Contra Costa County.

Only 4% of the 100 salesmen whose work they thus inspected bothered to get the potential "buyer's" name; 2% got the address and 12% the phone number. Though location is a key point in any home sale, only 55 of the 68 salesmen regarded as good and only five of 32 poor ones mentioned it.

Moreover, 29 of the 32 poor salesmen

Moreover, 29 of the 32 poor salesmen made no real attempt to sell the house. Five of the good ones likewise made no sales pitch.

Richardson considers five key questions essential to size up likelihood of a sale (children, income, ready cash, a future appointment and return later) so as to avoid wasting time on poor prospects. Not one of the 100 salesmen asked all five.

How both good and bad salesmen did at mentioning specific sales features (by percentages):

	GOOD	SALESMEN	BAD S	SALESMEN
Feature	Did	Did Not	Did	Did Not
Architect	51	5	6	26
Windows	43	23	6	26
Heating	54	12	6	26
Appliances		8	11	21
Floors	61	5	7	25
Roof	57	9	8	24
Exterior	59	. 7	9	23
Wash-dry	55	11	9	23
Bathroom	63	2	8	24
Shopping	50	16	11	21
Schools	40	26	12	20
Transportation	45	21	5	27

Conclusion: home builders must tell real estate salesmen more about their product.

#### First sign of building jobless?

Some labor leaders in California (which normally produces 18% of the nation's new homes) say unemployment is on the rise in the building trades. They blame the drop in housing.

The Sacramento-Yolo district carpenters union says 1,000 men are "intermittently" out of work compared to 200 normally unemployed. Painters local 487 says at least 75 painters are looking for work compared with the usual 18 or 20. Plasterer's local in Sacramento says 20% of its 200 members are without jobs, compared to a normal 1%.

### Damages for takeout default

The right of a builder to collect damages from a lender who has failed to live up to a contract to advance funds has been upheld by the federal district court in Washington, D.C.

After Judge Richmond B. Keech ruled in favor of the builder, Bradbury Homes Inc. of New York City, a settlement of \$130,000 was reached.

Defendants were Colonial Mortgage Corp. and Colonial Investment Co. of Washington.

The builder, who had planned 272 homes in suburban Maryland, charged Colonial breached the contract in 1951 after advancing funds for only 56. Ultimately, however, 156 homes were built.

### Military housing hurt by tight money; Pentagon asks FNMA to up prices

Serious financing problems are threatening to stall the Capehart military housing program.

The trouble is double barreled: the Pentagon is unable to sell Capehart mortgages on the open market, may have to fall back on FNMA. Builders are unable to get construction money even after they bid successfully on a Capehart job.

The builders' dilemma defies solution in the present tight money market. But the Pentagon is trying to solve the permanent financing problem. It has already asked FNMA to 1) buy Capehart mortgages at par and 2) cut commitment and other fees to a minimum.

FNMA has set a price of 99½ on Capehart mortgages but also charges ½ point processing and marketing fee and 1 point commitment fee—bringing the actual price down to 98.

The Pentagon contends that a builder would have to allow for these fees in his bid—thus the 2% would actually be included in the cost of the project to the government.

Presumably this would mean paring the actual cost of every upcoming project below the maximum of \$16,500 per unit.

FNMA has promised to consider a Pentagon request to raise its price but realizes that if it agrees, Capehart mortgages will pour into its portfolio and quickly use up allocated funds. Congress authorized FNMA to buy \$200 million in Capehart mortgages—enough to handle only 12,200 units of the 150,000 authorized. Pentagon officials now argue that Congress will boost this authorization when it learns there is no market for Capehart mortgages elsewhere.

Seven Capehart mortgages have been placed so far. The first sold at a 2 point premium. Prices dropped quickly to par. None have been sold since.

There are 12 projects with 5,475 units under construction—five do not yet have permanent financing. Neither do six others on which bids have been taken but contracts not let. In all the three Armed Services have secured approval for 199 projects totaling 79,131 units.

### Private insurance for repair loans sold by ex-FHA aide

continued from p. 37

(In FHA, the agency sends back a bill after a loan is reported, thus adding another round of paper work.)

When loans are paid off ahead of schedule, FHA gives the lender no rebate on his insurance premium. Frentz pro-rates a rebate. He says a bank "may get back 10% of the premium."

If a bank extends amortization of an FHA repair loan, FHA makes a new charge for the longer term. Frentz does not. "We figure we have already insured that loan's repayment, so we are glad to extend the coverage—at no extra cost."

Another freedom Frentz' customers get is on sale of homes and mortgages. Unencumbered by FHA rules, the banker is free to do just about as he pleases with the loan—let it pass on to a new buyer of the house or not. "The banker operates as best he can," explains Frentz, "realizing that if he files a lot of claims his rate will go up."

Frentz juggles terms faster than the government-slow FHA. Since his first loan, he has been handling \$5,000 loans for up to 60 months. It was only last August that FHA raised its maximum from \$2,500 for 36 months to \$3,500 for 60. FHA won't insure swimming pools, barbecue pits and some built-in appliances. Frentz can insure anything.

The Frentz organization, headquartered in Chicago (307 N. Michigan Ave.), has just processed its first claim. A couple in a southern state ran into matrimonial trouble which ended by the husband walking out and leaving the wife with too many children and too little money to keep paying for a patio. They defaulted, owing \$281. Executive assistant R. L. Radebaugh processed the bank's claim in three hours after it reached Chicago, sent it to Old Republic. Three days from the time the bank mailed the papers, a check was on the way.

Even though he urges banks to keep on doing business with FHA, too, Frentz figures he will soon be cutting deeper into the sizeable FHA market.

### Ben Hazen plan to tap more mortgage funds set

Ben Hazen's plan to woo large investment funds as S&L depositors—so S&Ls can boost mortgage lending—is about ready to begin.

Only approval of the Securities & Exchange Commission—expected by mid-February—is holding up the start. The plan, its backers hope, will tap millions of dollars of investment money that now largely eludes mortgages.

Hazen, president of Benjamin Franklin S&L of Portland, Ore. and former (1952) president of the US S&L League, reported that 602 participating S&Ls have elected nine directors who have chosen three trustees to administer the fund. Hazen is fund chairman. Vice-chairman and secretary is Earl O. Shreve, former president of the US Chamber of Commerce and now a director of the First Federal S&L of Fort Lauderdale, Fla. Treasurer is Walter W. McAllister of San Antonio who resigned as chairman of the Home Loan Bank Board in July. The mutual fund will have offices in New York City.

Under Hazen's plan, two years in the making (June News), funds from large investors will be deposited in insured shareholding accounts of participating S&Ls, thus giving them out-of-town savings to expand mortgage lending. Dividends from the savings will be distributed by the mutual fund trustees to the investors. Return is expected to average from 3 to 3.5%, an average of the interest rates of the 602 S&Ls which range from 2 to 4%.

Participating S&Ls will have to pay an extra ½% to the mutual fund to finance its operation—notably the salaries of agents who will solicit money for the fund.

On Hazen's list of potential investors: pension funds, municipal sinking funds, labor union health and welfare funds, cemetery funds. None of these are likely to be set up to service or even give home office supervision to a mortgage portfolio. So they have shied away from mortgage investment.

Even though yields on top corporate bonds are now up to 4%, Hazen expects his plan to click because the investor will be so safe.

NEWS continued on p. 66



### 3 to I best seller in New Jersey project features Insulite Roof Deck

Mr. Lester Robbins, president of the Robbins Co., Union, N.J.—builders of the successful Mountainside Park project says, "I'm more than pleased at the reception of our cathedral ceiling model. This Insulite Roof Deck home (shown) is moving three times as fast as all our other models combined!"

All over the country builders report Insulite Roof Deck saves money and does a big selling job, too! While reducing costs \$80 to \$300 per home, Roof Deck adds to the free and open look that today's home buyers find so appealing. The white, pre-finished underside contributes both quality and beauty to exposed beam ceilings.

Send for actual on-the-job pictures and construction details now. Write Insulite, Minneapolis 2, Minnesota.



It's roof deck—2' x 8' units cut application time as much as 45%. Only one material to handle. Insulite Roof Deck eliminates need for separate roof boards, insulation, lath and plaster and ceiling finishing. Roof Deck can save 12 man hours per 1000 sq. ft. of surface compared with 2" x 6" D&M roof sheathing.

It's finished ceiling—The underside of Insulite Roof Deck is finished with flame-resistant surface. Lay Roof Deck over prefinished beams . . . and ceiling is done. No need to plaster, paint, stain, wax. Cuts labor and material costs. In 2' x 8' units, 1½", 2" or 3" thick—with or without vapor barrier membrane (depending on climate).

And insulation with vapor barrier. No need for other insulation. 2" Roof Deck is comparable to 2" wood deck plus 1" fiberboard insulation. Available in 3 thicknesses to meet insulation requirements in any climate. Exclusive resilient gasket seal and vapor barrier membrane protect against condensation within the unit.

build better and save with

Insulite

INSULITE, Made of hardy Northern wood

Insulite Division of Minnesota and Ontario Paper Company, Minneapolis 2, Minnesota



BUILDER CLINIC PONDERS HOW TO BEAT SPIRALING CONSTRUCTION COSTS

### MATERIALS & PRICES:

### Cost clinic eyes savings in management methods; \$5 per NAHB-member research assessment urged

Can improved management techniques save home builders more money than better engineering and construction methods?

NAHB's two-day cost-cutting conference last month in Washington's National Housing Center focused most of its attention on the latter (see p. 168). Many a builder felt it was the wrong emphasis.

Said Builder Dick Dickman of Mountain View, Calif.: "We're talking about pennies. We should talk about management—not about the pieces of lumber. You look for savings and they are not all there. We should talk about coordination, not about partitions, trusses, sheathing and footings." Said Builder Robert Schmidt of Berea, Ohio (who sells for \$17,400 houses valued by FHA at \$20,400): "It's important to use good techniques, but more important to associate the techniques so the overall operation is economical. We are

building houses on a 'trades' concept [instead of] a manufacturing concept. Let us create the men for the job we design instead of using tradesmen who have been created for us."

Their views were seconded by Prefabbers George Price and John Morley, Prefab Dealer Ralph Shirmeyer and Big Builders Ray Cherry of Los Angeles, Joe Goldman of Chicago and Milton Saper of Long Island.

Other developments at the clinic:

- The 60 experts present adopted, without opposition, a resolution urging NAHB to levy \$5 a year against each member for research. Aim: ways to build a better low-cost house.
- ▶ Wide acceptance of the National Plumbing Code would save builders \$200 per house, it was agreed. The code permits fewer pipes, smaller waste pipes, less venting.

### MATERIALS BRIEFS

#### MPRs obsolete, says VA aide

Some FHA minimum property requirements are "obsolete" and operate to hold down the quality of US housing.

What makes this familiar complaint news is that it comes from VA's top technical official in Washington, Charles I. Hopkins, assistant director of construction and valuation.

Hopkins singles out minimum room sizes as one of FHA's "obsolete" MPRs.

As a result of the "strong influence of antiquated" rules like these, he told a conference of the Society of Residential Appraisers in Milwaukee, "housing today is being built down to these requirements and not above them." He added these are his own opinions, not official VA policy.

### **VA** restudies costs

VA is pondering revising its cost estimating procedures. Tom Sweeney, chief VA loan guaranty officer, cautions that the outcome is still a long way off. "So far, it's mostly in my head," he says. But VA has begun getting ideas from a committee of home builders.

#### **Appliance shakeout**

Rugged competition is putting the appliance industry through a shakeout. Beneficiaries: anyone who buys appliances, including home builders.

Despite rising production costs, appliance prices are holding steady.

When Avco Mfg. Co., a pioneer in the field, sold its Bendix home laundry line, and discontinued making Crosley appliances (refrigerators, freezers, TV sets and radios), it fortified the belief that the US appliance industry is developing like the auto industry—toward domination by four or five giant makers of complete lines of appliances with a few minor manufacturers specializing in one or two items.

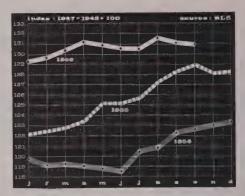
Says a West Coast manufacturer: "There are enough appliance production facilities in this country to make two or three times the amount of products the market can absorb." Judson Sayre, president of Bendix from 1941 till it was sold to Avco in 1950, feels the appliance giants are waging a battle of attrition. Now president of Norge, Sayre said: "The industry has been committing every sin continued on p. 69

### FTC probes appliance men's attack on home builders

Chairman John W. Gwynne of the Federal Trade Commission has confirmed that the FTC is investigating complaints that home builders are giving appliance men unfair, cutprice competition.

The Natl. Appliance and Radio-TV Dealers Assn. complain that builders are: 1) buying refrigerators and other big items from manufacturers and distributors at carload prices lower than those charged appliance stores and 2) diverting them to discount houses on a "relatively large scale."

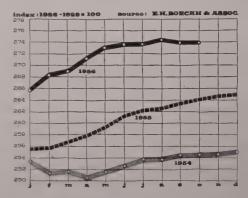
"We are still investigating," Gwynne told House & Home last month. "There are some complicated questions involved. Of course, after we run down the complaints, we may find there is nothing to them." (Some building circles think the complaints may be a smokescreen to set up a major attack on the package mortgage.)



### Materials prices hold steady as lumber continues to fall

Building materials costs show signs of stabilizing because of the big drop in lumber prices. The BLS index held steady at 131.0 in October after dropping the month before from the all-time August high of 131.5. Wholesale building materials prices are now only 1.8% ahead of the level a year ago.

Lumber prices sagged for the sixth month in a row (to 122) and now stand 2.7% under the year-ago mark. Plywood is 9.4 below October 1955. The price of prepared paint rose in October and now is 6.6% above its year-ago level.



### Boeckh housing cost index holds level, but rise due

Boeckh's building cost index for residential construction remained at 273.9 in October. Col. E. H. Boeckh says increases he expected did not materialize. The reason: suppliers who had announced price rises effective this fall cancelled them because of a drop in demand. "The volume is just not there now," says Boeckh. While declining housing starts are responsible in part, Boeckh says many big construction jobs also have been postponed. He predicts an upward turn in the index Jan. I when new labor contracts go into effect.

in the book. Some of these so-called giants have been buying off the key markets . . . small dealers have been the victim of small mark-up, small margin."

A General Electric spokesman thinks there are sound reasons why more manufacturers are either plunging for a full line of appliances or getting out of the business: 1) more and more homes are being built with kitchen units installed, 2) housewives want their equipment to match. 3) large companies have large research staffs, so they can continually make improvements. A small manufacturer can't keep pace.

Tabulations of 1956 appliance sales show built-in range and oven, dishwasher and dryer sales well up from 1955. Refrigerator sales are off 10%, due largely to the drop in housing starts.

#### How amenities boost costs

FHA has wheeled up big ammunition to bolster its claim that home builders, not FHA minimum property requirements, are responsible for much of the high price of today's houses. The agency, after a survey of 285 homes in 14 cities, charged that builders are tacking 39% extra onto the price of the average house by exceeding MPRs (Nov., News). If they stuck to the minima, the cost would be \$7,521 instead of \$12,402, FHA insisted. Here are the extras:

Fireplace and chimney	\$675
Expandable attic	675
Gutters and downspouts	90
Half a bath on separate stack	300
Full extra bath on separate stack	450
Attached frame garage	625
Brick veneer instead of painted siding	450
Extra interior painting	325
Half a bath on common stack	250
Full extra bath on common stack	400
Porch, 10' x 12'	350

Not all the extras applied to each house, of course. While it was surveying, FHA also asked 218 builders and 185 mortgage lenders what was adding to costs. Reports the agency: "most builders agreed" that the public demands construction "far in excess of MPRs." Most builder complaints involved items like topsoil, basement screens, solid driveways, insulation or septic tanks. So FHA Chief Architect Neil Connor now contends that local rules on lot sizes and site preparation are the real villain of rising house prices.

#### Freight rate boost asked

Railroads are about to boost building costs

Lumber and lumber products are the chief building items involved in their newest petitions to raise freight rates.

Industry spokesmen are unable to estimate so far just what the effects will be, but eastern and western carriers asked for a 15% rate boost last September, then asked an emergency 7% increase on top of that to offset pay raises. Lumber would be subject to hold-downs, however.

Southern railroads have asked the Interstate Commerce Commission to approve an immediate 7% rate hike, with no hold-down for lumber.

#### **Utility boosts adequate wiring**

Adequate wiring is getting two-way support from the Commonwealth Edison Co. in Chicago:

- 1. It is running full-page advertisements in Chicago newspapers, naming and picturing builder-homes with 100 amp. service that "lets you live better—electrically."
- 2. It has started a share-the-cost plan to get 100 amp. service in existing homes. Com

Edison pays the cost (\$45) of running a wire for 100 amp service to the home for a homeowner who buys a new major appliance—one requiring 240 volts or more. The homeowner pays for the switchbox and interior wiring (\$74). If a homeowner wants 100 amp. service but does not buy a major appliance he must pay the \$45 wiring fee to the utility company but gets a certificate entitling him to a refund if he buys a major appliance within nine months.

"We're assured of getting our money back," says an Edison spokesman, "A 240-v. appliance makes it easy."

#### Electric outlook bright

National Electrical Manufacturers Assn. got a glowing picture of the country's electrical future at its November convention in Atlantic City. Items:

Ralph J. Cordiner, president of General

Electric, noting that output of electrical goods has increased to \$20 billion—double that of ten years ago—predicted: "If we continue to serve our customers only as well as we have in the past decade, we can see that by 1976, the market for electrical products reported by NEMA should be in the order of \$90 billion at today's prices."

▶ S. J. Stephenson, manager of Westinghouse's portable appliance division, predicted that if new product development is as rapid in the next ten years as it has been in the past ten, then 50% of the appliance sales in 1966 will be products not even on the market yet.

He added: "Not only will there be 25 million more people ten years hence but all families will have 50% more money to spend on appliances than today's family has."

NEMA elected Arthur A. Berard of Mount Vernon, N. Y. its new president. He is president of Ward Leonard Electric Co. and succeeds J. W. Corey of Cleveland.

#### **COMMUNITY FACILITIES:**

# Public Health Service testing sewage treatment plant for 10-100 home tracts

An inexpensive sewage treatment plant which can be built to serve as few as ten homes is being tested by the US Public Health Service.

If tests this winter are as successful as those made this summer and fall, the plant should give small builder-developers a big boost in competing with big builders and land developers. Exact costs of the plant are not known. But health service engineers at the Robert A. Taft engineering center in Cincinnati believe cost of plant, trunk lines and laterals will be no more than \$400 to \$500 per home. This is about the same cost as septic tanks.

#### Help for remote locations

The health service started early this year with the announced intention of developing a disposal plant to serve 10 to 100-home projects, too far from existing trunk lines and too small for their own standard disposal plant.

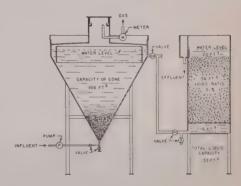
Engineers built a scale model of a modified anaerobic plant—one in which bacterial action continues without oxygen in a closed tank. Encouraged by its success, they built a pilot plant in Loveland, Ohio, put it in operation in July. It consists basically of a 1,240-gal., cone-shaped contact tank, a rock-column tank and a displacement pump.

Tests so far have shown that initial cost is low, maintenance and operating costs are low, little operating attention is needed—yet the plant delivers a safe effluent and creates no nuisance odors.

#### Remaining problems

Though cheered by this, health service engineers have met some problems. Initial tests have not clarified the effluent as much as desired. Nor-is it clear how high operating costs will be, how home owners will share the maintenance costs or who would guarantee the plant's operation.

Experiments will continue until July. In these seven months, engineers are confident they can overcome the technical problems while maintaining the plant's simplicity. Meanwhile, they believe some local public health boards may approve the system or at least permit test installations. For instance, Lee Kraus, chief sanitary engineer at Peoria, Ill., hopes to use the new system to convert



Sewage enters at bottom of 1,240 gal. coneshaped tank in Loveland test plant, loses its sludge particles through bacterial action as it flows upward through the biologically active sludge blanket. Gases released through bacterial action are collected in the manhole and conveyed through a check valve and meter to the air. (Most sewage solids are eliminated through this bacterial action.) The treated liquid enters the rock column at the bottom, passes upward through 4' of rock supported on a false bottom. Any remaining solids cling to the rocks. Effluent leaves the unit by means of an adjustable overflow. Sludge is constantly washed by the incoming sewage preventing accumulation of volatile acids and other soluble waste products.

a local primary plant for some 200 or more homes.

Prototypes of this new plant could be operated indefinitely but the health service sees them primarily as temporary substitutes. When the area where they lie is fully developed, they expect a community sewage plant would replace the small one. Trunk and lateral lines from the original system would tie in with the new plant.

### Jersey builders seek power to build, lease schools

Legislation to let home builders put up public schools and lease them to local communities has been asked by the New Jersey State Home Builders Assn.

The scheme is one way money-pinched communities can build new schools without a big investment, the builders said.

The Jersey association also asked federal government financial aid to meet long term school needs.

NEWS continued on p. 73





A striped floor is a good way to add a custom-built look to your houses. It will catch the attention of your prospects right away. Here, three different colors of Armstrong Royelle® Linoleum (factory-cut in 2' widths) have been combined to create a striking design that says immediately, "this is no ordinary house." A handsome floor styled like this adds little or nothing to your normal building costs.

Here's another effective way in which a resilient sheet flooring can make your homes stand out above competition. Choose a directional flooring design, such as this handsome style in Armstrong Decoresq<sup>®</sup> vinyl plastic Corlon, and have some of the material miter-cut and installed at right angles to the rest. A simple, economical trick—yet it adds much to the visual impact of your homes.

### Floors can make trac



Resilient floors can add more than a *look* of luxury. This smart new Mosaic\* Corlon floor adds an extra *feeling* of luxury, too. It is the first and only resilient floor that's available with Cushion-Eze\* (foam) Back\*\*. Here's the luxury and underfoot comfort of soft surface floor covering—combined with the practicality of easy-to-clean, dirt-resisting plastic. An extra feature you can really merchandise!



When you offer Armstrong Cork Tile in the master bedrooms of your houses, the extra luxury of this rich-looking, comfortable flooring will help turn lookers into enthusiastic buyers. Point out the practicality of this modern floor, too—it's easy to demonstrate how much housekeeping work it saves. Cork Tile's smooth, splinter-free surface eliminates lint catching crevices and simplifies sweeping under beds.



NAHB'S HAVERSTICK & NAREB'S TURLEY

### NAREB CONVENTION:

# Realtors chafe at tight money urge flexible FHA, VA rates

FHA and VA interest rates were Topic A in St. Louis last month as 5,100 of the nation's 59,000 organized realtors held their 49th annual convention.

Interest rates were also Topic B. And Topic C.

Without a murmer of dissent, NAREB adopted a policy statement lining up with mortgage bankers and other housing trade groups to demand the two government-backed mortgage programs be given "flexible interest rates"—that is, rates fixed administratively, or by a non-political board, not by Congress. NAREB's action left NAHB the only important housing group which has not come out either for higher VA and FHA interest or for complete flexibility. NAHB is weakening, but some of its influential leaders, notably expresident Thomas P. Coogan, still contend raising interest rates would be little longrange help to money-shy builders.

To realtors tight money cuts both ways. Said a broker from Lincoln, Neb.: "I'd always prided myself I'd never lost a deal for lack of financing. But I've lost six of them recently." Reported a broker from Berkeley, Calif.: "The rental market's firmer than at any time in the last two years. Young couples can't get a low-down-payment loan to buy a house now, so they have to rent."

The convention got plenty of expert advice about what to expect. Some of the broadest prophecy came from Economist Miles L. Colean of Washington (see photo, below). Not only did Colean predict flatly that FHA and VA interest rates will be raised because "we are rapidly approaching a frozen condition," but he reported that lenders have already decided rates are going up and are withholding money from the mortgage market in anticipation of the better yield from higher interest. Said Colean:

"If we wait until Congress convenes it may be too late to retrieve the situation and 1 million units may not be feasible next year. I see no reason why FHA shouldn't move at once. If they don't move

before Congress gets back, a delay of several weeks is certain. Until we know what the government is going to do . . . nobody can figure out his 1957 plans."

Higher FHA and VA interest will prove no magic cure-all for tight money, Colean warned. "It's easy to exaggerate what an interest hike would do," he said. "The effect might be disappointing. It's likely to be slow. Builders need time to step up their program. But if we don't get an interest raise, the market is going to be seriously hurt."

NAHB President Joseph Haverstick declared: "It's high time we raised the FHA interest rate and quit worrying about when Congress comes back." He foresaw a "trend toward builders growing larger." Reason: "Many smaller operators are having trouble surviving because of difficulties in financing." Warned Haverstick: "The money situation is going to remain as is for some time."

Economist Arthur Weimer, dean of the continued on p. 77



Economic panel (1 to r: Prof. Ernest Fisher, Economists Miles Colean, Arthur Weimer) analyzed prospects for next year. Weimer called nation's economy "politically rigged in favor of inflation," said this "favors real estate investment—in the shortrun." Fisher said demand for real estate is now an all-time high. Colean forecast good year in 1957 for realtors.



Big name speakers included Sens. Barry Goldwater (R, Ariz.) (above) and John Bricker (R, Ohio) (right). Bricker said middle-income housing program is "sheer madness."



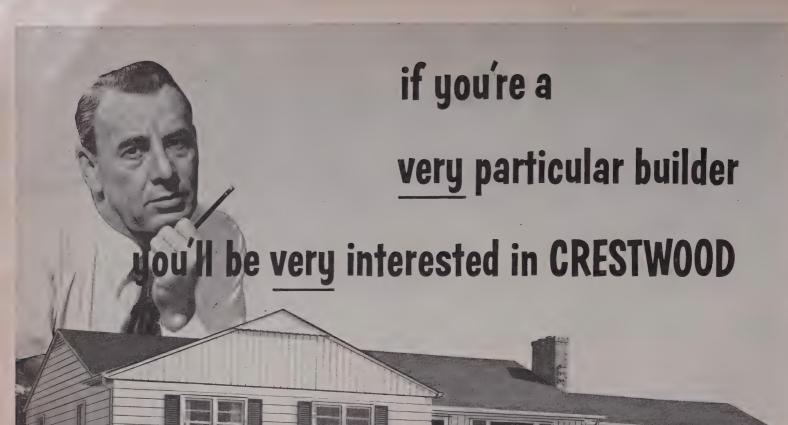


Architects' viewpoint was sounded by Kenneth Wischmeyer of St. Louis, former AIA first vice president. "One of the major reasons why housing isn't getting its share of the consumer dollar today," he said ". . . is that the American public has been given too many poorly designed homes. They're not up to the standards we expect of autos and appliances."

Wischmeyer put major blame for this and "shabby subdivisions" on the fact that building, the nation's biggest industry, is also its "most unorganized." Result: government appraisers OK cheap houses; builders "take the easy way out and won't fight; mortgage lenders are too willing to approve outmoded designs; architects aren't in the field; realtors are slow on the uptake."



Convention leaders included Eugene Conser, NAREB executive vice president; Daniel F. Sheehan of St. Louis, convention chairman; C. Armel Nutter of Camden, N. J., who was re-elected treasurer for a third term; Ed Mendenhall, High Point, N. C., public relations chairman.



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University of Indiana school of business administration and consultant to the US Savings & Loan League, remarked a "shift in public sentiment" on interest rates. "People prefer low-interest," he said, "but not if they have to pay high discounts. The FHA-VA interest rate is now truly a political issue."

Realty Analyst James Downs of Chicago foresaw "no change in the money situation for the first half of next year." Even so, he predicted that housing will not necessarily nosedive further. Reasons: 1) "builders have got to operate to keep their crews together;" 2) some builders can absorb high discounts by sacrificing part of their land profits.

Only thing that would make the administration ease its tight-money brakes on housing, as Downs saw it, would be increased unemployment in the building trades—"in short, a depression or a threat of one." He predicted: "This will not happen."

The drop in housing, he said, means "it is easier to sell homes now than it was 12 months ago and it will be easier still to sell homes six months from now." Residential rents, he noted, are "up more in the first nine months of 1956 than in all of 1955."

Sen. Barry Goldwater (R, Ariz.) warned that "pseudo-liberals" who believe in "more

Federal control—not freedom" will again pressure Congress for housing programs at fixed interest rates." He added: "These people—in their dreaming—think money comes from the fourth dimension. They don't like initiative. They think a person should be born into the security of government."

Goldwater urged realtors and the rest of the "American business fraternity" to bestir themselves energetically against labor leaders—"especially Walter Reuther—who have exploited the union movement until it's become not an economic but a political movement." He added: "One of the most damnable things they are doing is to try to divide this country" into big business and "little men." Said Goldwater: "99% of the business in the US is small business."

#### CANADA:

### NHA loans sag even more than FHAs and VAs in US

Canada's government-backed housing program is now in a worse slump than FHA and VA.

Loans under the National Housing Act,

which have dwindled for several months, took their biggest nosedive in October. For the month, they totaled only 38% of the October 1955 volume. (FHA and VA starts for the same month represented 70% of the year-ago pace.)

The Bank of Canada rediscount rate (loans to chartered banks) was raised to a record 3½%—the sixth increase in 14 months. A month later, the NHA interest rate was still pegged at 5½% amid increasing expectation the government will soon lift it to 6%. But now, Canadian mortgage men wonder if 6% interest will help the flow of money very much. Reason: the credit squeeze in Canada is tighter than ever and it seems certain to continue in 1957. Fall has brought an ununprecedented flood of stock and bond issues, indicative of a general scramble for investment funds.

Even if 1956 starts fall 10% from last year's, they will wind up 10% ahead of 1954—the next best year.

### NEW PRESIDENT: Kenneth Keyes, the South's biggest realtor

Kenneth Scofield Keyes (rhymes with cries), president-elect of the Natl. Assn. of Real Estate Boards, has built what he figures is the largest realty firm in the South by imaginative property management and an almost unique cooperation with other brokers.

The Keyes Co. has seven offices in Florida, from Homestead to Ft. Lauderdale, with headquarters in Miami. It manages four office buildings in Manhattan and others in Milwaukee and Montreal. Chairman Keyes is president of some 50 corporations owned largely by investor-clients, many of them Latin Americans. In all, Keyes has 220 employes including 90 salesmen (60 residential, 20 commercial, 10 industrial). Last year, the firm grossed \$58 million; this year Keyes expects it will be more than \$60 million.

#### Volume in existing housing

Although the bulk of Keyes' business is in residential sales (as witness the 60 house salesmen), almost all of it is in existing housing. "We rarely sell a house for builders," says Keyes. (One reason, it appears, is Keyes' firm rule: "Never cut a commission.")

Instead of cutting fees, Keyes has successfully raised them through his listing service. Daily, The Keyes Co. distributes to several score smaller realty men around Miami a package of brochures, reproduced in his own office, picturing and detailing property offered for sale. Keyes charges customers a 2½% override for this listing, on top of the normal 5% broker's commission. Cooperating realtors keep the full 5% if they sell the property. Small operators find the listings so valuable they are glad to do business this way with the big firm.

Keyes, who will take office in January succeeding Clarence M. Turley of St. Louis, is a stocky and bespectacled man of medium height. His hair, at 60, is beginning to silver.

A Southerner by adoption, Keyes was born in Morenci, Mich., grew up in Detroit and graduated in 1917 from the University of Michigan with a degree in business administration. In World War 1, he joined the Army as a private, emerged a first lieutenant of infantry. Next, he became a salesman in



NAREB PRESIDENT-ELECT KEYES

Alabama for B. F. Goodrich Co., the tire makers. A few years later, he resigned as district sales promotion manager to start an advertising agency in Atlanta.

In January 1926, lured by the fabulous profits of the Florida land boom, he sold out to a junior partner and opened his realty firm in Miami.

"I got there just in time for the boom to blow up in my face," he recalls. So The Keyes Co. got its start in property management, has done "very little" land development—although Keyes regards today's second boom in Florida land as "nothing comparable to the shoestring days of '25."

Keyes says he still gets his "biggest kick" out of management—buying and improving old office buildings and operating them into bigger profit. In recent years, this is almost the only kind of deal he has handled personally. One of his best, he thinks, involved an old hotel in Bradenton, Fla. He bought it (for investor-clients), converted it to a department store and raised its value 300%.

#### 10% for the church

Keyes' hobby is church work. Not only is he a tithe-paying elder in the Presbyterian Church (his firm, too, gives a tenth of its earnings to religious work), but Keyes is also a frequent lay speaker before church groups throughout the nation. His company opens each week with a 15-min. devotional service (attendance voluntary) of recorded hymns and, often as not, a talk by a local minister. He set up the Keyes Foundation to finance scholarships and give other aid to education.

At the bottom of The Keyes Co.'s interoffice memoranda is printed a maxim that seems to embody Keyes' philosophy: "Give to the world the best you have and the best will come back to you."

Keyes gives not only to the world, but also to his employes. His corporation, for instance, is now more than half owned by key executives. Eight years ago, it became one of the first in real estate to set up group insurance and hospitalization with the company paying half. To this has been added a profit-sharing and retirement plan to which the company allocated 25% of its profits the first year and 15% a year since.

Keyes regards his 12-year-old mortgage department as a "baby" in the firm. It is an approved FHA mortgagee, but has never dealt in VAs. Last year, it averaged \$1 million a month in originations.

#### To visit small boards

Keyes recently sold the company airplane and, since he says he has no plans to buy another, presumably will let commercial airlines carry him and his attractive wife, Ruth, over the 80,000 miles a NAREB president must travel during his year as spokesman for the nation's 59,000 organized realtors. In Keyes case, the mileage may be even more. He says one major aim will be "to carry the NAREB story to many smaller boards" who do not often see their national president.

Many a president of a building industry trade association pays a large personal price for his year in office because he cannot give enough attention to his own business. Keyes' organization, headed by President L. Allen Morris, looks big enough to carry on easily without him. "I've only been home about six days in the last six months, anyway," Keyes smiles.

\*\*NEWS continued on p. 81\*\*

# Steel windows help sell homes



"See how easy it is to open this window," says our attractive young miss. And she's right. Steel windows are easy to open and close. And because steel windows are dimensionally stable, because they do not shrink or warp' out of shape, steel windows stay easy to operate.

The style of the house changes—the type of windows changes—but they're still made of steel. Notice how different windows add originality to this smart home in Rolling Meadows Sub-Division, Arlington Heights, Illinois. A Kimball Hill & Associates project; Joseph T. Carp, Inc., builder; A. J. Del Bianco, architect.



PHA'S SLUSSER, FHA'S BEVERLEY MASON AND URA'S RICHARD STEINER IN NAHRO PANEL

#### NAHRO CONVENTION:

# Housing, redevelopment officials ask more federal aid, less federal control

Local housing and redevelopment officials want more federal money and less federal control to speed urban renewal.

This theme was sounded again and again last month at the annual convention of the Natl. Assn. of Housing & Redevelopment Officials in New York.

Said outgoing President Robert D. Sipprell, director of the Buffalo Housing Authority: "Excessive control and regulatory demands are keeping urban renewal at a snail's pace. We aren't eliminating old slums as fast as new ones develop."

New President Knox Banner, head of the Little Rock Housing Authority, agreed: "We realize some federal regulation is needed if federal money is used, but the slum problems are local problems. They vary so much from city to city that only local people on the scene are really qualified to decide what is best to meet the needs and solve the problems." (This is the reason some private enterprisers think cities should clear their own slums, largely through rehabilitation and housing code enforcement.)

Banner asked again that HHFA adopt the recommendations of a NAHRO task force to clear away red tape by giving more authority to regional offices.

The new NAHRO president suggested that Congress allow HHFA to pay 90% of the cost of urban renewal instead of 6643%.

"Cities have so many more costs with limited revenue sources they can't afford the tremendous job of clearing slums," he cried.

Mayor Richardson Dilworth of Philadelphia, taking part in a panel discussion, proposed an increase to 80% and added: "Regulations should be revised so cities get more credit for more things in the cost-sharing plan. Our recent clean-up, fix-up drive was very successful but it could have been much more successful had the federal government given us credit and paid part of the cost."

NAHRO summed up its feelings in resolu-

- 1. Asked "immediate steps . . . to simplify procedure and to adopt policies which will enable the fullest expression of local initiative and local responsibility."
- 2. Urged "a study of the ability of local communities to carry forward broad urban renewal programs, with full recognition of the financial limitations within which such communities must operate." The feasibility

- of increasing the present two-thirds allocation . . . should be fully explored."
- **3.** Reiterated its stand that "unless the federal government is willing to take a risk that local public agencies will make mistakes, it cannot adhere to the concept of urban renewal as a local activity, locally administered, nor can it permit the experimentation out of which can come progress in urban renewal as a whole."
- **4.** Directed its officers to use "every resource available . . . to bring about a restatement and clarification of the proper division of federal and local responsibility."

Redevelopers indicated they are not convinced the Sec. 220 rental housing program is attractive to sponsors and investors, particularly with the new 3% sponsor's equity requirement. A dissenting opinion came from Herbert S. Greenwald of Chicago, sponsor of the \$25 million Gratiot project in Detroit. He told NAHRO he likes 220 and thinks investors will, too. But admitted he has no takeout yet for Gratiot.

NEWS continued on p. 84



Knox Banner, (l), a tall, mild mannered Texan, is the new president of the Natl. Assn. of Housing and Redevelopment Officials succeeding Robert D. Sipprell (rd. Banner, 42, executive director of the Little Rock, Ark. Housing Authority, is a former federal bureaucrat. He worked for the Social Security Administration as a Field Office Manager before World War 2, joined PHA as assistant to the regional director in Ft. Worth after wartime service as a naval Lieutenant (j.g.). He took the Little Rock job in 1954. Born in Ft. Worth, Banner has a reputation as a thorough planner. (He even planned his family so that no two children would be in college at the same time. Their ages: 15, 10 and 5.) He is a graduate of the Rice Institute and a Phi Beta Kappa.

### Public housing vacancies up as 'good' families flee

Public housing's vacancy rate is rising—due mostly to the flight of normal, well-adjusted families from a steadily worsening environment.

The Natl. Assn. of Housing & Redevelopment Officials, whose members manage the 412,000 US public housing units, skirted the problem warily at their annual convention last month in New York. They admitted privately, however, that it is a source of great concern because it involves the basic question of just what public housing's long range function is to be.

Warren Vinton, assistant PHA commissioner, told NAHRO the vacancy rate has risen to 3.5%—significant gain over the 2.8% of a year ago. These vacancies—an estimated 15,000 units—are costing PHA \$5 million a year in additional subsidies, he said.

His boss, PHA Commissioner Charles Slusser, said later in Washington that the vacancy rate is actually 3.3%. Slusser said PHA won't be officially worried until it goes above 3.5%. He denied the vacancies were costing PHA \$5 million. Vinton also backed down, said \$5 million is estimated lost income due to vacancies but that PHA, itself, ultimately makes up only a small part of it through subsidies.

#### Slusser, NAHRO disagree

Slusser attributed increased vacancies to the desire of some families to be nearer transportation and schools and churches of their choice.

Many NAHRO members took a different view. Their explanations:

- 1. Some units in integrated projects are left empty until a white family applies for admission. Though there may be many Negro families waiting and qualified to move in, housing authorities insist they must maintain at least an 80-20 white-Negro ratio or risk having an all-Negro—in effect segregated—project.
- 2. Some families move out of public housing to cut housing expense. Required to pay 20% of gross income for public housing, they often can get by for less by renting a slum unit.
- 3. Main cause for increasing vacancies is the tendency for low-income but honest, hardworking families to move out of public housing to get away from the poor environment created by an increasing number of problem families moving in.

#### A 'temporary home'

Miss Elizabeth Wood, former Chicago Housing Authority director, summed it up in a NAHRO session: "So long as public housing is the temporary home of the capable, the honest, the ambitious—a home such people would rather not accept if possible—but it is the permanent home for the damaged, the non-normal, the deceitful, public housing will not produce good neighborhoods."

Public housers have three choices, she said: 1) to turn their projects into hospitals for problem families, 2) operate them like real estate operators and keep the problem families out or 3) find a way to let people live in public housing after their income has passed the maximum which allows them to stay there.

One possibility: sell some units as co-ops to families who would otherwise have to move because of too-high income. Commissioner Slusser mentioned this as one apparent answer but said it would probably require a change in the law.



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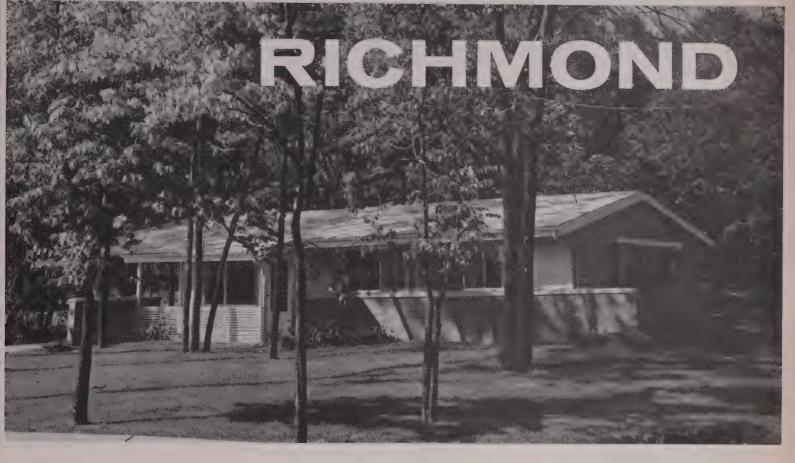
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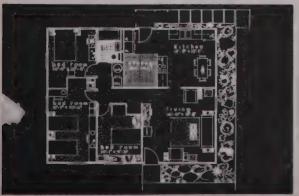
Selling techniques, which close sales for you, are demonstrated by trained factory representatives. This problem of selling has been successfully achieved for many Richmond Dealers. We can do it for you!

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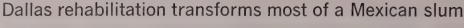
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### HOUSING CAMERA:

\$6 a month rent was the income from these frame hovels in Dallas' Little Mexico before rehabilitation. After an average of \$1,200 was spent fixing each one to conform with codes (photo at right), they rent for \$45 a month. That means a return on the repair investment in less than three years, barring huge assessment increases. A few former residents were displaced but all were able to find other rentals within their means. In all, says HHFA, only 25 families are to be displaced by the neighborhood fixup.





# FHA jumps in with Sec. 220 approval—after area is three-fourths rehabilitated

FHA has just proudly announced that it has, for the first time, approved a typical aging urban slum for Sec. 220 rehabilitation mortgage insurance. Crowed FHA:

"A 60-acre residential area in one of the older sections of Dallas can now look forward to a brighter future because of a new approach to urban renewal by US housing agencies."

The facts: by the time the government acted —in what it called the "relatively short space of five months"—the job was three-quarters done, as pictures on this page indicate.

Dallas' Little Mexico, until the city and

Dallas' Little Mexico, until the city and its residents went to work about a year ago, was a pie-shaped sector of blight pointed like an arrowhead at Dallas' skyscraper-studded downtown only half-a-mile away. Some 390 of sits 450 dwelling units were classified as substandard. Plumbing was lacking in 27% of the houses; 75% lacked hot water. Most of the 1,800 residents hold comparatively lowbut steady-income jobs as elevator operators, parking lot attendants and janitors. Most of them are first and second generation Americans although many still cannot speak English.

In the early years of this century, a few refugees from the uncertain politics and economics of Mexico settled there. Others followed until by 1920 the neighborhood was definitely Latin-American. It has no Negroes.

A year ago, when bustling young (34) Alexander Bul took over as Dallas urban rehabilitation and housing coordinator, he picked Little Mexico as a likely place to be-

gin his work. Bul is a municipal heavyweight. He carries the additional title of assistant city manager. Soft-spoken, he knows top city officials and has the rank to get them to provide the help he asked.

After he sent inspectors through the area, he met with residents, picked 40 block captains to explain and sell the project to individual families. Then he organized a trash clean-up, netted 40 truckloads. Next came house-by-house notifications of building and housing code violations. Most residents welcomed the rehabilitation. A few of the 300 landlords held out. Two have been taken to court. Others were shamed into cooperation when shown big pictures of their junk property.

While approval of Sec. 220 aid was still uncertain, Bul and some industry volunteers began contacting local lenders to encourage them to make loans. It proved unnecessary. Latins have good repayment records in Dallas. Some were getting loans at bad rates from shady lenders. Bul helped channel applicants to reputable firms, including many S&Ls. When gyp contractors moved in fast, started fleecing home owners. Bul installed a Spanish-speaking clerk at the building inspector's office.

The whole job was done without city power to buy slum areas or condemn them for resale. Says Bul: "This was designed as a practical program. It doesn't create palaces but it is providing better housing and represents a good start." NEWS continued on p. 89



Before rehabilitation, this duplex at 2805-07 North Pearl was not even rentable. Rehabilitation prospects were good in the neighborhood because 60% of houses are owner-occupied. Most landlords live there, too. Absentee landlords account for only 15% of dwelling units.



After rehabilitation, the same duplex rents for \$45 a month per unit. The owner spent about \$3,000 on the job. One by-product of drive: several wetbacks, scared by the Gringos' room-by-room probings, fled South. Now, Dallas is thinking about upgrading codes.



Early results of the rehabilitation effort were so encouraging that the owner of this old house razed it, although new building was not solicited by city officials.



New house, gleaming white, replaced the demolished shack. So far this is the only new house in Little Mexico. At one apartment, rehabilitation inspired occupants to start a flower garden.

### CLOSEUP: A 'stranger' who seized a \$7 million title firm

Most Los Angelenos have never heard of

William Breliant and perhaps never will. He is a stubby (5' 7"), pudgy (180 lbs.), shock-haired 34-year-old who came to southern California from Chicago 11 years ago and gravitated into the real estate business. He didn't make a name for himself, but he made money-chiefly by buying a property (usually in partnership with several other men), running it for awhile until the market appreciated, then selling out. His office generally was his apartment.

Last month, after a proxy fight as surprising as it was sudden, Bill Breliant (pronounced brilliant) ousted the top management of Security Title Insurance Co. of Los Angeles, and, with no experience in the business, became chairman of the third largest title firm in the nation.

#### \$7 million prize

Breliant, a round-faced man with the air of a friendly used-car salesman, gobbled up the \$7 million title firm in a little less than a year, beginning with a stock investment of \$9,000 which eventually grew to \$29,000. In doing so, he goaded President Howard H. Rolapp,\* firmly fixed and running a profitable one-man show, into resigning with a vitriolic valedictory.

On the record, Breliant was an unlikely victor in a clash with Security Title or Rolapp, a Harvard-trained lawyer who had worked his way up through the title business since 1931.

Born in Chicago of a south side real estate trader, Breliant grew up helping his father, Aaron, in a variety of enterprises. He quit Woodrow Wilson Junior College after less than a year to lend a hand in a liquor store. When the Air Force scorned him (he was overweight, had flat feet and his right arm, shattered in five places in an auto accident, had mended imperfectly), he came to California. For a time, he drifted through a variety of jobs: senior timekeeper a Western Pipe & Steel Co. in San Pedro, assistant manager of a Los Angeles drug store, seasonal clerk for the L.A. County assessor. By 1945, Los Angeles' booming real estate scene encouraged him to try his father's line. I had no capital," says Breliant. "I just had me."

#### Pattern for profit

He moved in with an accountant on Beverly Blvd., paying half the \$60 rent. spent most of the first weeks looking for a partner to pay half of that," says Breliant. In this quest he failed. But he found busi-

\* Cousin of Walter Rolapp, whose Pacific Mortgage Co. of Los Angeles recently merged with T. J. Bettes Co., nation's biggest mortgage bank-

### Target: Biggest Title Firm

Brash young William Breliant, who wants to make Los Angeles' Security Title Insur-ance Co. into the biggest in the nation by mergers, is shooting at big game. Here is the lineup of the biggest title firms, based on 1955 figures:

	Gross	Net
Title Insurance & Trust		
Co. (Los Angeles)\$2	8,000,000	\$6,500,000
Chicago Title & Trust		
Co 1	4,500,000	3,500,000
Security Title Insurance		
Co 1	4,000,000	2,000,000
Lawyers Title Insurance		
Co. (Richmond Va.) 1	1,000,000	2,000,000

His first deal set the Breliant pattern of success. He took an option on a vacant, scabrous building in Venice, Calif., leased it to a winery, then sold the building for \$37,000 (the winery remained a tenant). Breliant and his two partners of the moment divided a profit of \$12,000.

From then on, his maneuvers varied only in size and complexity. Breliant would sniff around until he found a poorly managed property—usually an apartment whose owner was sinking in a sea of first, second, third

RAIDER BRELIANT

From a \$9,000 investment, a \$7 million firm

and fourth mortgages. Breliant would corral the needed capital, customarily through partnerships, buy the building, manage it into the black and sell out. Says Breliant, after 11 years and some 75 major deals: "All the people associated with me have never earned less than 50% on their investment.'

With his profits, Breliant, who had no dependents (his marriage dissolved in 1952 after four years, no children) began playing the market casually. Weeks after doubling (in six months) a modest investment in Land Title Insurance Co. of Los Angeles, he sank \$9,000 in 500 shares of Security Title. That was 18 months ago. "It was an extremely attractive buy," says Brelliant. "The stock was selling for about \$18 a share, and was earning \$2.47½—a ratio of less than eight." Over the months, purely as a good investment, he bought more.

By March this year, his holdings began to attract attention of Security Title. Howard Rolapp expressed a desire to meet him and the first visit was arranged by Treasurer Russell Padget Jr., who had been in touch with the firm's big new stockholder by phone and who eventually sold Breliant 5,000 shares of

#### Too many yesmen

By this time, Breliant had developed a distaste for Security Title's management. Its cash dividends were under 20% against an average of 50 to 75% among other title firms. Nine of the 14 directors were Security Title brass-yesmen for Rolapp in Breliant's estimation. And the firm had 25% of its assets tied up in offices (it has 22 in 15

southern California counties including L.A. headquarters, but does no business in Los Angeles County which is the domain of Title Insurance & Trust Co., No. 1 in the nation).

The meeting was chilly. Of his misgivings, Breliant stated only one to Rolapp. He suggested Security Title's board might be invigorated by a draft of outside blood and that he, Breliant, would be happy to serve. Rolapp rejected the suggestion coldly. do not have time to educate an outsider in the title insurance business," he said.

#### And so to war

With these words, President Rolapp probably spelled his ouster from the company he had headed since 1952. Breliant called in his attorney, Merwin S. Kreeger, 39, and drafted a response to a form letter from Rolapp which Breliant had received after his first stock purchase in 1955. "We hit him with a broadside,' says Breliant. He proposed to:

- Increase cash dividends from 20% to 331/2%. plus a 10% stock dividend.
- Split the stock two for one
- ➤ Split the stock two
  ➤ Bring "substantial"
  board of directors. outside blood into the
- Name an executive vice president from within the company to take over "in case the president is incapacitated.'
- Lease all future offices.

When Rolapp rejected all the proposals, Breliant threatened to send them to every stockholder. "He told me if I didn't like the way he was running the company I could sell my stock and get out," Breliant recalls. "I told him . . . I could fire the president, because the president was working for the stockholders."

Breliant went to court and in August won an order compelling Rolapp to give him a list of stockholders. The fight was on. In the next three months, Rolapp erupted with a rash of proxy appeals, each more anxious than the last. "Your company's successful management," said one, "is being challenged by a new minority shareholder, Mr. William Breliant . . . and his unnamed associates.

Breliant mailed only one proxy solicitation. But he concentrated on Security Title's large stockholders, working 12 to 17 hours a day on the raid, stoking himself steadily with starchy meals (and gaining 20 lbs.). He wound up controlling better than 220,000 of the firms 477,525 shares—including more than a few from Rolapp's own hirelings on the board.

#### The shakeup starts

On Oct. 19, the sudden and savage fight ended. Rolapp resigned, noting that "a stranger, William Breliant" and his friends would be able, with cumulative voting, to "elect a substantial minority of directors. to harass the present management." Breliant and Kreeger joined the board.

Last month, Breliant began his promised shakeup. Security Title directors:

Voted a 20% stock dividend payable Dec. 28. Increased the annual cash dividend from 80¢ per share (with the stock dividend, this is equal to \$1.20 a share).

Appointed two new directors: Jack Irvine, president of Western Mortgage Corp. and William Hayden Ahmanson, vice president and secretary American Insurance Co. and vice president of the H. F. Ahmanson Co., holding company for Howard Ahmanson's Home S&L Assn. the nation's largest.

Authorized Breliant to explore the possibility of mergers with several other title companies.

Says Breliant: "I want to make this the biggest title company in the business."

NEWS continued on p. 93

# How to sell the home buyer who shops and compares

No matter what today's families buy—new car, new TV, or new home—they shop around and compare. And since a house is the biggest investment the average family makes, all model homes in the area come in for critical comparison. The house that usually wins their final approval is the one that offers the most in comfort, beauty, and economy; in other words, the best *value*.

Faced with buyers who demand the most for their money, many builders are using new kinds of materials that add sales appeal and create extra value the moment they're installed. Some of the most popular of these modern materials are made by the Armstrong Cork Company. For a quick rundown on these materials, check the three products shown on these pages.

1.

# quiet and beauty in one material

Armstrong Full Random\* Cushiontone is a sound-conditioning material that adds quiet and beauty to any room in the house. A Cushiontone ceiling in your model home will impress prospects when they "hear" how it gives your homes the modern comfort of quiet. Full-page ads in Life and leading home service magazines are preselling prospects in your area. And the installation of T & G Cushiontone is fast and easy. Your men simply staple it over furring strips and the ceiling is completed.





# PEOPLE: Herbert U. Nelson, for 33 years realty's top spokesman and lobbyist, dies after second stroke

Herbert U. Nelson—for 33 years the nation's Mr. Real Estate—died Nov. 19 in Evanston, Ill., 13 months after his retirement as executive vice president of NAREB.

Though in failing health since suffering a

Walter Daran



stroke in 1954, Nelson, 70, had attended the realtors' convention in St. Louis the week before his death. He had a second stroke Nov.. 17. In his 33 years as executive head of NA-REB, Nelson built the organization from 413 local boards to 1,200, from 16,000 members to 55,000. He worked for license laws. He organized NAREB's in-

stitutes-brokers, management, appraisal, industrial, realtors, farm brokers and the Urban Land Institute-all steps which did much to professionalize the responsible real estate man. (He started a home building institute which split away from the parent organization in 1942 and became NAHB.)

In his time, Herb Nelson became one of the industry's-and the nation's-most influential lobbyists. After World War 2, his campaigns against public housing and rent control (the threat that brought him-unwillingly-from NAREB's traditional Chicago headquarters to Washington) led President Truman to assail the "real estate lobby." The New Republic, no lover of realty interests, tagged Nelson as one of Washington's "three invisible senators.'

Nelson's articulate conservatism sometimes carried him into political storms. The biggest came in 1950, when a House lobbying investigation seized and released a private letter in which Nelson had written: "I do not believe in democracy. I think it stinks. I believe in a republic operated by elected representatives who are permitted to do the job as the board of directors should. I don't think anybody but direct taxpayers should be allowed

Herbert Undeen Nelson was born in Ellsworth, Wis., graduated from the University of Minnesota, worked briefly as a silver miner, seaman and newspaper reporter in Seattle. He became secretary of the Minneapolis Real Estate Board in 1917 and there, as secretary of the Minneapolis planning commission, drafted one of the nation's early zoning ordinances. He was named NAREB executive vice president in 1922.

In the early 30's, Nelson's proposals for a stronger home credit system drew President Hoover's attention, led to establishment of the Home Loan Bank system. Later Nelson helped Cordell Hull, Marriner Eccles and other Democratic leaders plan the Home Owners Loan Corp. He also gave strong backing to FHA in its critical early years though mortgage bankers in NAREB opposed it and quit NAREB because of it.

# Raymond Saulnier, money-credit expert, heads economic council

Dr. Raymond J. Saulnier, who succeeded Dr. Arthur F. Burns as chairman of the President's Council of Economic Advisers last month, shares Burns' opposition to more moves to tighten credit.

Inside the administration, Burns has been leading critic of the Federal Reserve's tight-money policy. He argued especially for

easing credit for housing and small business. Saulnier shares Burns' views but Washingtonians wonder if he will crusade for them with

Saulnier (pronounced Sohnvay) is an urbane six--footer of 48 who can put together a fine French souffle in the kitchen of his Washington apartment, shoot golf in the low 80s and likes to discuss the lore and topography of Nova Scotia. He is one of the nation's top authorities on money and credit and a professor of political science, on leave, at Columbia University.

He was named consultant to the Council of Economic Advisers in spring 1953 and became a full member of the council in April 1955. In 1950-51, he was a consultant to the Federal Reserve on real estate financing and a year later counseled the Agriculture Dept. on farm financing problems.

# Douglas Meredith elected head of New England Council

The New England Council, a kind of super chamber of commerce, picked one of the nation's top mortgage men as its 1957 president: L. Douglas Meredith, executive vice president of National Life Insurance Co. of Montpelier, Vt. Oscar, Chicago

Meredith, now 51, is a unique figure in lending circles: a successful revolutionary. His idea, first argued in his Ph.D. thesis at Yale in 1933: "Money has to be sold the same way that suits and dresses are." To Meredith, a mortgage is not just a lien on property but "a means of raising the standard of living." That slogan is



MEREDITH

commonplace now. In 1933, it was far from accepted doctrine.

Throughout his career—assistant professor of economics at Vermont University, Vermont State banking and insurance commissioner-Meredith has pioneered new methods. He joined staid old (108 years) National Life in 1935, and turned it to investing in FHA loans while other bankers cried socialism. In 1946, he persuaded National Life to become the first insurance company to offer the package mortgage nationally. Today, half of National's new mortgages are package mortgages. Meredith pioneered a year later with the open-end mortgage, which he saw as a good way to merchandise loans when they were hard to get. Today, half of National's new mortgages are open-ended.

Latest extension of the Meredith philosophy has made National Life a big purchaser of loans on trailers. "In the last 30 months, we have handled more than 5,000 mobile home contracts, roughly \$15 million worth, and our only loss was \$75," he says. "You've got to keep up with modern developments."

# Builders who made Russian tour still talk—5 months after return

The 14 US home builders who got back from a tour of Russian housing five months ago have been on a talking spree ever since.

A House & Home check shows that by mid-November the 14 had made 317 speeches about their trip. The American appetite for news of Russia is so insatiable that at least

one local association executive was giving talks on his impressions of the builders' impressions of the Soviet. Busiest speaker is Carl Mitnick, NAHB treasurer of Merchantville, N.J. who has made 45 talks. Other talkative builders: John Worthman, of Fort Wayne, Ind., 40 speeches, Martin Bartling of Knoxville, Tenn., 32, Harry A. Boswell, Jr. of Mt. Ranier, Md., 30, and Arthur Oman of Brockton, Mass., 27. Only builders who have given less than 20 talks are Marvin M. Helf of Cleveland, 6, and Edward Pratt of Royal Oak, Mich., 12.

Mitnick also leads in frequency, averaging four or five talks a week. But Ernest Fritsche had the busiest single week-seven talks in seven days.

All 14 have addressed the same types of organizations: civic and fraternal groups, PTA's, trade associations and church groups. Earl Smith of El Cerrito, Calif. and Worthman have also appeared on radio and TV.

Most of the men illustrate their talks with slides and/or film. The most staggering: S. N. Adams of Houston, who sometimes shows all 400 of his slides plus 2,000 feet of film. This takes three hours. Most talk 30 to 45 min.

Most of the visitors to Russia expect to wind up their speeches by January or Febru-But Worthman and Andrew Place of South Bend, Ind., have speaking dates in April and Hans Heymann of Washington, D.C. thinks speaking possibilities for the future are "infinite." Adds Adams: "I'm ready to quit anytime."

Three of NAHB's biggest affiliates have new presidents:

The Long Island Home Builders Institute (1,200 members) elected A. Sidney Roth of Massapequa, L.I. to succeed Anthony Zummo. Roth, a builder for 15 years, was an All-American guard on the Cornell University football team in 1938. The Building Contractors Assn. of California picked Bob F. Roberts of San Bernardino, BCA secretary for the past year, to succeed Ernani Bernardi. New Jersey home builders elected Louis V. Bossert of Trenton, succeeding Earl R. Simpson of Brigantine.

MARRIED: John M. Dickerman, executive director of NAHB, and Miss Serafina Amelia Peoria, daughter of Mr. and Mrs. Joseph Peoria of Youngwood, Pa.-he for the second time. Mrs. Dickerman, who attended Seaton Hill College in Pennsylvania and works for Sun Oil Co. in Washington, is a former secretary to Sam Neel, Washington counsel for the Mortgage Bankers Assn.

# Big Builder Milton Kauffman dies; built 20,000 homes

Big Builder Milton Kauffman, 74, of Los Angeles, died Nov. 6. He had been hospitalized since December 1955, when he suffered

a severe heart attack later complicated by diabetes Kauffman was found-

KAUFFMAN

er and president of four - year - old Kauffman- Wilson Co. With this firm and his earlier one, Milton Kauffman Construction Co., Kauffman built 20,000 homes in 49 communities in the postwar

In each of House & Home's four tabulations of the biggest US builders (1951-55) Kauffman's firm was among the top five (2,527 units in 1955).



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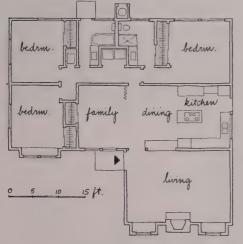


# LA builder out-Cinderellas Cinderella, gets best seller

The most successful Los Angeles architects this year, say quipsters, are the new firm of Hansel & Gretel.

Cinderella-type houses have become such a hit in the roller-coaster southern California market that Builder Ross Cortese's new 4,000-house Rossmoor project near Long Beach has become a best seller.

Despite their shake-and-scallop exteriors, Cortese's homes have a remarkably open-plan inside. In his best selling \$18,650 model (see photo), a 1,619 sq. ft. home with three bedrooms and two baths, you enter a living room which fills the whole front wing. A den-TV room has a sliding glass door facing an open kitchen. The home also reflects the



trend toward a big master bedroom. It has a really big front overhang—4' instead of the 2' found on too many "contemporary" tract homes.

Window seats on either side of the fireplace, Cortese finds, are popular. Say Sales Agents Walker & Lee: "We're finding that a lot of things we used to do 30 years ago like the window seats, still help sell houses." Price range of other models: \$15,550-\$19,700.

# Manilow starts new project of \$30,000 houses

Nathan Manilow, one of the country's leading experts on the middle-income house (he, Philip Klutznick, Architect Jerrold Loebl, and the late Carroll F. Sweet Sr. founded giant Park Forest, south of Chicago) has jumped into the expensive house field in his newest subdivision built by the Manilow Construction Co. (which is not associated with Park Forest).

Most of Park Forest's 4,000 productionline houses sold for \$11,000-\$17,000, with a few up to \$23,000. Manilow's new venture is aimed much higher. On wooded sites ½ acre and up) northwest of the city, he is putting up two tri-levels (1,840 and 1,970 sq. ft.) and a ranch model (1,500 sq. ft.) with prices from \$29,875 to \$32,000.

Manilow, who built 190 houses last year in the \$28,500 price class, says that the four-bedroom, 2½ bath model at \$32,000 is his best seller.

# Four-bedroom houses get nod from 6 out of 7 families

Six families out of seven prefer a fourbedroom house (at \$14,900) to the threebedroom model (\$13,690) in **Joseph E. Merrion's** new subdivision southwest of Chicago.

The former (1945) NAHB president has sold 155 houses since spring, better than one a day.

Big emphasis is on space, both in house and lot. Architect **Emil J. Minx's** design put 1,375 sq. ft. under roof, with 1,100 sq. ft. of actual living area, and all houses are on half-acre plots, 100' x 200'.

Says Merrion: "Many of our buyers orig-



inally bought houses from us as newlyweds. Now they need more space, inside and out, to raise the three-to-five children they have today." Popular Mechanics magazine calls Merrion's house "one of the nation's best home buys."

# Los Angeles sales volume drop forces rise in broker's fees

DeWitt W. Lee of Los Angeles' Walker & Lee, who sell homes for more builders (50-60) than any other broker on the West Coast, has boosted his fee from 1½% to 2% of sales price. Reason: it now takes longer to sell a house.

Says Lee: "Most of our expenses remain the same even when sales volume slows down, and we have to pay our good salesmen if we want to keep them. Builders have accepted this raise, and are very cooperative in advancing us half the commission when a sale goes into escrow. Before, we had to wait until closing before we got paid."

Lee reports that the usual \$200 per house for advertising has risen to \$300-\$500 in some slow selling projects.



Fall-proof fixtures in bathroom will support as much as 500 lbs. if occupant slips.

# Special design taps market for Florida retirement homes

Developer **George E. Beauchamp**, a retired VA official, tailors both his specifications and his community to the special requirements of his buyers: retired couples with limited incomes. In Orange Gardens at Kissimmee, Fla., his first 67 houses are up or under construction, and contracts are signed for as many more.

There are no steps up or down in the houses to minimize accidents. Doors are 34" wide (instead of the normal 30") to accommodate wheelchairs. Cabinets and closet shelves are low enough to reach without climbing. Every projection in the bath which might be used as a grab bar will bear 500 lbs. Electric outlets are high on walls, to avoid stooping.

The two- and three-bedroom houses start at \$7,340, go to over \$10,000 including utilities and landscaping. Construction is done on contract by Builder K. C. Moore Jr.

Financing is special, too. Conventional 6% mortgages up to two-thirds of purchase price are written for 10 or 15 years (depending on whether buyers are over or under 70). Beauchamp will take second mortgages, if necessary, but finds that over 90% of his buyers pay cash or down to the mortgage. (His few second liens are all with younger couples.) Beauchamp credits FHA for help in planning both the houses and the community.



# Guided tour for school kids wins good will for builders

Builders Joseph Shapiro and Martin Buxbaum are winning community recognition of home building and its problems through school children.

They have begun tours through their 400-house project on Long Island for local pupils.

Chaperoned by teachers, the class watched foundations being poured, framework erected, and finishing operations underway. The tours ended in a model house. They will be continued until all children in the local school have had a chance to add the ABC's of home building to their knowledge. Reaction from children, parents and school authorities: enthusiastic.

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Celo-Rok® Wallboards for strong, economical walls, partitions, and ceilings. Joint Reinforcing Products for use with special tape to reinforce and conceal wallboard joints. Celo-Rok Plasters: A complete line of gypsum plasters of uniformly high quality. Celo-Rok Anchor Lath, plain and perforated. Celo-Rok ½" Weatherproof Sheathing, water-repellent, noncombustible gypsum core.

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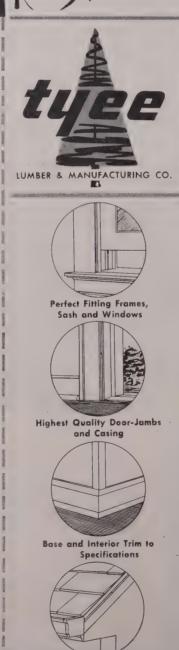
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#### **MONEY**

The Money Round Table (H&H, Nov. '56) is a remarkable job. I shall use your material in our meetings at the convention

Eugene P. Conser Executive vice president NAREB, Chicago

Housing's money crisis is not a matter of economics, but of communication.

The managers of money in the Federal Reserve System use economic reports as facts. They know these reports are late by periods ranging from a few weeks to a couple of months.

Incredible as it may seem, what they do not appear to know is the time lag between the application of credit restraints on housing and their maximum effect upon the rate of activity.

The housing industry is still operating on money which went into its hopper more than a year ago. It is suffering, and complaining, but still operating. The supply of this money, as I think we all know, is much reduced at the source. In the early part of 1957, the cumulative effect of the pinch will be felt with a terrible suddenness.

If the Governors of the Federal Reserve wait until that happens, will they then try to cope with it by a slight relaxation in some interest rate? Are they perhaps not fully aware of how long it will be before the full effect will be felt of whatever measure they do take? Will there then be time to save housing without measures which will wreck the rest of the economy? Or can the housing industry be ruined without wrecking the rest of the economy?

The question is whether the managers of money policy, in their well intended efforts to avoid a general economic crisis, are not preparing a situation in which a general economic crisis will be unavoidable.

If so, the failure here is, I repeat, a failure of communication. The period of gestation in housing is three or four times the actual construction time. The Governors have apparently not realized this. It is important that they should.

HERBERT HARVEY, Real Estate Hackensack, N. J.

# HOMES FOR BETTER LIVING

We are glad to cooperate again this year in the annual awards for "Homes for Better Living." The program has been a real influence on the trend toward better housing and I extend our hearty congratulations for your leadership.

HAROLD P. BRAMAN, executive manager National Savings & Loan League, Washington, D. C.

# WIRING ROUND TABLE

Could you send us 50 reprints of the Wiring Round Table?

We plan to use them for a local conference of electrical contractor organizations, some builders, wiring supply manufacturers, municipal electrical inspectors and the IBEW, FHA, and VA.

HARRY GUEST Union Electric Co., St. Louis DECEMBER 1956



PREFABRICATION ISSUE

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Cover: Frank Lloyd Wright's prefab for Erd-man Homes. Photo by William Wollin Studio

# TODAY'S PREFABS:

# A challenge to all of home building

Figures often lie. At least, they don't always tell the *whole* truth. Take the figure for prefabs sold in 1956: that figure is only 7% of all US home building for the year—hardly more than a drop in the bucket, you might think.

Well, think again. For prefabrication's influence on *all* US home building in 1956 was much greater than the sales figures indicate.

And prefabrication's influence on *all* US home building in 1957 will be greater still.

It will be greater in design and it will be greater in construction. It will be greater in those two fields because here the prefab industry is not only pointing the way, but also forcing its chief competitors—the on-site builders—to raise their sights, and to raise them fast. Here is how and why:

# Design standards are up throughout the prefab industry

Leading prefabbers have now retained the best US architects to design new models for them (see opposite page). This means not only that prefabs will be better to live in and better to look at—it also means that those who compete with prefabs will be forced to turn out a better product.

# And prefabrication techniques are making big strides too

Here again it's not numbers but influence that counts. For what the prefabbers are doing to industrialize home building is duplicated by on-site builders throughout the country.

Or if it isn't, it had better be—soon! For unless US home builders start producing more with less labor and less waste of materials, our industry will not cash in on more than a small part of its vastly expanding potential market. For some startling facts about that coming demand, see the articles on pages 155 and 166.

Prefabrication's 7% of the home building market may be a drop in the bucket, but that drop begins to look like a pretty powerful dose of good medicine. It's a dose that has done much to change home building to date, that will do a lot more to change home building tomorrow.

And whether you are an architect or an on-site builder, a prefab dealer or a lumber dealer, a realtor or a mortgage banker, that drop in the bucket may do a lot to change your place in our industry.



# Here is prefabrication's biggest news for 1957



Entrance is set deep into house for protection from elements. Frank Lloyd Wright planned and supervised the landscaping.

Glazed doors (below) are typical Wright detail, made inexpensively. Low entry ceiling makes 13' living room seem taller.





Frank Lloyd Wright has at long last built a prefab house and Erdman Homes is putting it on the market for 1957.

This is both big news and amazing news.

. It is big news because it gives prefabrication—once the stepchild of home building-

the prestige associated with the greatest name in contemporary architecture.

It is amazing news, because the principal advocate of standardization and modular planning had to wait 60 years before he got his chance to put his original theories into practice. Wright had been designing panel construction systems since 1910 using materials like wood, steel and concrete.

The house shown on this page grew out of a long association between Wright and Marshall Erdman, the prefabricator. At the start of the project Erdman told Wright, "we must use stock materials to save me from bankruptcy: anyone can make a shake roof look good, but it takes a master to make something of asphalt shingles." Wright sat down and detailed for the roof the shadowline battens you see in the photograph.

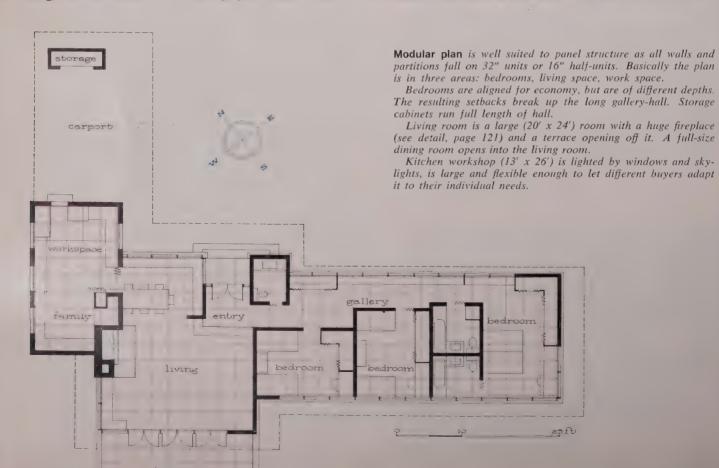
The walls have battens too, to seal joints in the wallboard, and give the house a sweeping horizontal look. Even the stock wood windows have been handled in a refreshing manner. They are grouped in long horizontal bands or in large geometric patterns. At the gable end they are cut to fit the slope of the pitched roofs.

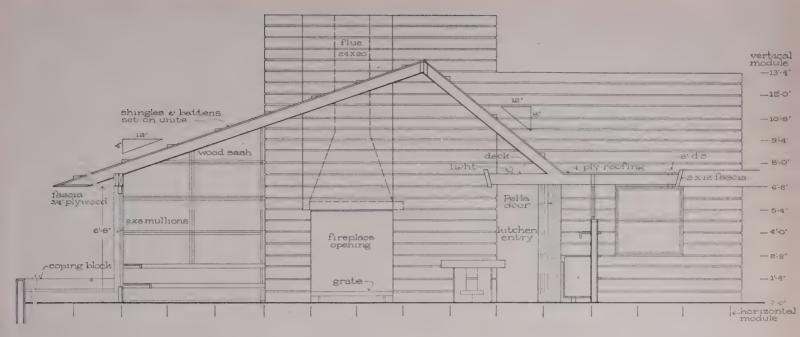
One of the great qualities of Wright's genius is his ability to satisfy rigid conditions. This prefabricated house is a case in point: it has every basic design idea in Wright's vocabulary, yet it can be produced within the prefabricator's budget.

To see how it's prefabricated, turn the page >>>



Long, low house stretches 83', has large glass areas on southern side. House was oriented to the site by Wright.





**Cross section** through living room shows construction of doublepitch roof with ridge off-center. Deck at right carries rafters, spans between fireplace mass and wall return at front door. As

in most Wright houses, built-in cabinets and shelves are important decorative features. Economical flat roof is used over those parts of house that jog out from the basic plan rectangle.

# Here is how Frank Lloyd Wright designs for prefabrication

Some of the elements in this prefabricated house are essentially the same as you'll find in almost any of Wright's custom built houses (for example, the floors). But in other cases (the walls, for instance) Wright has obviously engineered for mass production techniques. Here, step by step, is how the house is built:

Foundation. "A house should have a sturdy base," says Wright. Here the foundation extends 4" beyond the house to keep water away from the footings (see wall section, page 121). While the pilot model shown here is built over crawl space, a basement will be optional. For basement access, a stairway will replace present powder room (see plan, opposite page). Heating for the house is provided by subfloor furnace (150,000 Btu output) and a plenum system.

**Floors.** Framing under floors is 2 x 10" joists with 1" of plywood subfloor. Finish flooring is a rubber sheet product manufactured in large pieces that fit the unit system of the house plan and look like large glossy red tiles. Wright has used this same flooring in many commercial buildings.

Walls. A feature that Prefabber Erdman feels is important in selling his "sturdy-construction-conscious" market is the conventional 2 x 4" framing in the walls. Outside walls are faced with a slightly textured Masonite board.

Wood battens are nailed on at 16" vertical centers to seal joints and provide strong horizontal lines. These battens have a drip milled into the underside. Inside walls are faced with ¼" mahogany plywood (in full size 4 x 8' sheets), with a somewhat smaller batten also on 16" centers. Wall sections are cut and assembled in Erdman's factory in full-size pieces, loaded and trucked to the building site.

Windows. Stock awning-type wood windows are used throughout. They are fitted together with a double 2 x 4" bearing mullion between each 4' window. Combining window openings is a cost-saving technique advocated by the Illinois Small Homes Council and practiced by Wright for 60 years.

**Roof.** With the ridge off-center, the roof has a distinctive double pitch (see section above). Erdman finds that the special cuts required for this are easily mass-produced. Framing is entirely of 2 x 8"s. Interior ceilings follow the roof pitch, and are faced with gypsum wallboard. Roofing on pitched roofs is asphalt shingles with battens that follow plan module. Over flat roofs it is 4-ply built-up roofing with gravel topping.

The roof is precut by Erdman, is assembled on the job rather than in his factory.

Masonry. In the masonry section of the house standard 8 x 8 x 16" lightweight insulating block is used. The cores are filled with insulation and the blocks are run through a masonry saw to give them 5%" bevels along the horizontal edges. The result is a V-joint, emphasized by the flush vertical joints. All block masonry is reinforced horizontally with welded mesh every second course. Block is painted with waterproof paint after erection.

"This is the biggest thing that ever happened to us," says Madison prefabber Marshall Erdman. It is the largest model made by 250-unit-per-year Erdman Homes, which already has several smaller one-story models and a split-level on the market.

For further details on this house, turn the page.

DECEMBER 1956

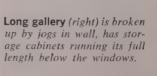


Living room floor level is 16" lower than bedrooms. As in rest of house, natural wood walls, battens are handsome, integral ornament.



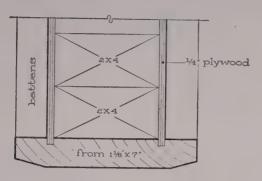
# Wall panels create interior ornament

Entry (left) provides extra light and view for living room. Powder room is at right, bedrooms further along hall. Note recessed lighting.

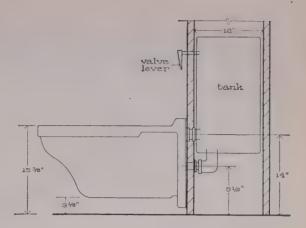




# These are important details

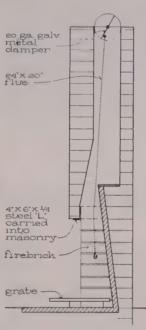


Interior door jamb is in one piece, is milled in one operation. It eliminates scribing of plywood, which fits into grooves, also acts as terminal for battens. The use of folding doors throughout the interior of the house eliminates the need for protruding door stops.

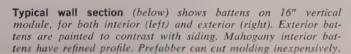


Wall-hung toilet is an innovation. Still in experimental stage, it combines a standard wall-hung bowl and a porcelain tank that is recessed 12" in wall. Manufacturer will have similar arrangement for 6" or 8" wall available next year, possibly with flush valve.

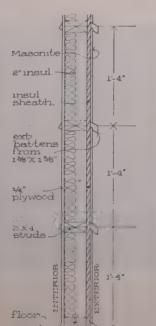




Fireplace detail shows use of standard concrete block with beveled horizontal edges and flush vertical joints. Opening is 4' wide, 5'-4" high, offering maximum heat reflection. Fire is built on a strap iron grate raised 4" above floor. Chimney damper is optional.











Scale model shows typical exterior design. The house can be varied by using alternate plans (below), different lot placement, or exterior finishes

# Here is Modern's new plan for a flexible prefab

Architect Yamasaki designed this model for maximum flexibility in size, orientation and plan.

His scheme is based on two zones: one for living, dining and cooking, the other for bedrooms and baths. He offers three different plans for each zone; they can be combined to suit the site and the family.

For example: with a sloping site the two zones might be separated by a flight of stairs. With a narrow site, the zones can be lined up the long way of the lot. A large family which seldom entertains can have three bedrooms and a family room in one zone, with a small living area in the other, while a small family might want plenty of space for entertainment.

Because the wall panels are interchangeable, each zone can easily be made larger or smaller. Architects: Yamasaki, Leinweber, & Associates.

Model plan (upper right) can be varied as shown in three alternates (below).





Glass wall at rear of contemporary model opens living area to terrace. Ceiling beams continue through wall to support 6'-8" overhang.

# This glass-end ranch is big news in a conservative market

Admiral's big market, Pittsburgh, has long favored traditional styles. But for 1957 Admiral is breaking with the past and offering this big contemporary model.

Chief feature is a big glass wall that opens up the whole daytime area at the rear of the house. A 6'-8" overhang shades this glass and protects the terrace. To add to the contemporary look the garage is tied into the house by a trellis. The 1,232-sq. ft. house retails for \$18,390 with basement but without lot.

Inside the three-bedroom model, living and sleeping areas are neatly zoned. A second bath opens to the entrance hall for easy access from the daytime side of the plan.

Admiral's sales are directed three ways. Like the rest of the prefab industry, the company sells to dealers (who generally build on odd lots and small developments) and to tract builders. But Admiral's third direct customer is the consumer. The manufacturer, not the dealer, does the selling job.

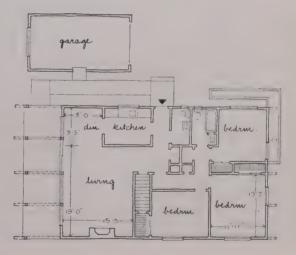
To sell the home buyer, Admiral uses model houses just as a dealer would. When the prospect already owns his lot, Admiral can quote him a firm price for the house and its erection, complete. After the sale is made the job is turned over to a dealer who builds the house.

Admiral's quotations to the buyer are based on a detailed schedule prepared for each model and agreed to by the dealers and subcontractors who carry out the work for the buyer.

This prepricing system is a valuable tool for Admiral when the prospect wants the whole story there and then.

Here is the prepricing schedule for Admiral's new contemporary model:

Shell, including beams, glass doors, garage, garage door\$	5,995
Trim, with select flooring	1,125
Shell erection	1,025
Garage and trellis installation	205
Trim erection	365
Plumbing (with service lines)	
Drywall	950
Wiring	650
Heating	



Plan sets bedrooms and one bath apart from the living area.

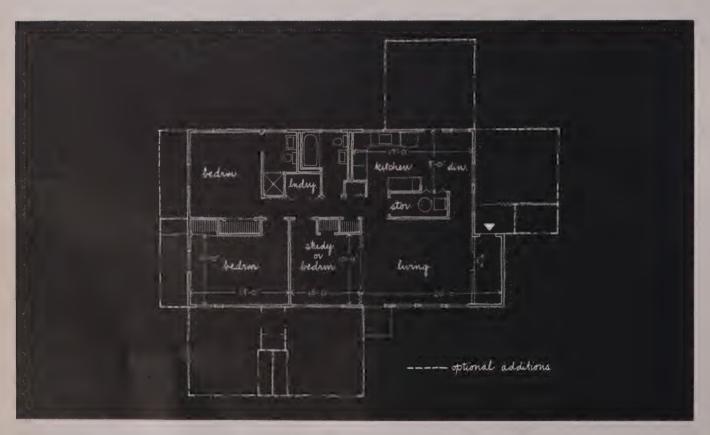
Birch cabinets	535
Tile, kitchen floor, bath and powder room	120
Sand and finish floors	105
Brick, including planters	1,300
Plastic tile	350
Foundation, including excavation, windows, column supports	1,685
Painting including chimney flashing	725
Porch and breezeway floors and black top driveway	570
Freight (two trips)	110
TOTAL	18,390
Optional extras as shown:	
Fireplace\$	350
Stone entrance	140
Simpley disappearing stairwell	45
Simplex disappearing stairwell	50

DECEMBER 1956



View from street shows house turned long way of lot, with living and dining rooms toward the street. Carport is next to kitchen.

# Variable plan fits this house to most markets



Plan with heavy outline is the basic one. Entire family rooms and extra bedrooms may be added, and basic rooms sizes increased.



Living room walls show how random grooves hide joints.

As the above plan shows, US Steel has developed a house that can be expanded in any direction.

The basic package has three bedrooms, two baths, living and dining rooms and kitchen. It sells for \$11,800. Because the house uses a standard stressed-skin panel unit, the basic size can be freely expanded, the number of rooms freely increased. Steel's top price is expected to be about \$20,000.

US Steel claims that this use of stressed-skin panels makes their models particularly safe for hurricane-belt construction.

The interior wall panel is random-grooved to hide the actual panel joints. Made of plywood, the panel is first grooved, then sprayed with a filler, sprayed with a lacquer and then baked, and finally, sanded. As a result, its hard surface is equally resistant to dirt and small children.



Breezeway between house and garage makes extra living space that can be easily screened. Basement adds to indoor floor area.

# Here's a five-bedroom prefab with a traditional look

This prefabricated house gets a traditional look from its materials, height, and decorative details.

Its materials are brick and white clapboard siding. Its height is a story and a half—like the old Cape Cod house—which gets in two of the bedrooms and another bath.

The decorative details include the shutters on the bedroom wing and the sidelights at the front door, which are direct descendants of the colonial.

The price range on this model is from \$30,000 to \$45,000, depending on options.



Plan concentrates all bedrooms in one wing for privacy.



Street side is faced by living room and kitchen (behind screen at right in photo). All bedrooms look to the rear of the lot for extra privacy.

# Contemporary's price ranges from \$15,000 to \$25,000

Because American plans to distribute this 1,200 sq. ft. house from Maine to Georgia, it will have a \$10,000 spread in its price with lot. The biggest reasons are the extreme difference in land and labor costs between different parts of this large sales area.

Another reason is the wide choice of options for this model, which can be built with or without items like the carport, fire-place and basement. When a basement is included, the stairs go in the place shown on the plan for the heater and laundry equipment. In the present location they are screened from the family room by a sliding louvered door (also optional).



Open plan makes family, living rooms one large space.

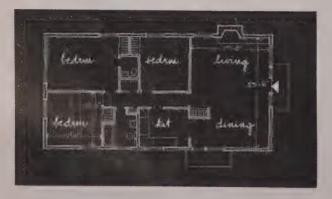


Carport and storage area is separated from family entrance by 12' covered walkway, forming a patio. Fencing screens the patio from street.

# Conventional brick veneer covers this frame prefab



Kitchen has the usual appliances; washer dryer are optional.



Plan gives kitchen control of entrances and private patio.

To give its houses a custom look, Knox Homes is finishing the exteriors with conventional brick veneer, laid at the site.

The company feels that its buyers want the economies of a prefab house with the look of a custom design. This is their answer.

The model shown gets extra texture and color variety by using old brick set off by gray wood trim and a front door painted a light blue-green.

Another change makes this model 4' longer than last year's, adds 48 sq. ft. to the living and dining areas and 24 sq. ft. to each of the two rear bedrooms.

All regular Knox models are designed to include air conditioning as an optional feature. This one is priced at \$16,500, including the air conditioning and the usual kitchen appliances, but exclusive of land.

Architect: John McCabe, Knox staff. Area: 1,253 sq. ft.



Living room repeats old brick of the exterior in fireplace and hearth.



**Street side** of this new National house has a latticed front porch about 6' deep, which can be screened in easily. Exterior siding is Masonite.



Rear terrace is reached through dining room's sliding glass doors, left, or through kitchen door, center. Outside storage area is at far right.

# This front porch is matched by a terrace at the rear

Today's design for outdoor living has gone full circle in this house by architect Charles Goodman for National.

The old fashioned front porch, which went out when on-grade contemporary came in, is used here to provide pleasant outdoor living space and add some decoration to the simple lines of the exterior.

Still more outdoor living space is provided by the terrace at the rear of the house. The terrace can easily be reached from the dining area or the kitchen (photo top right).

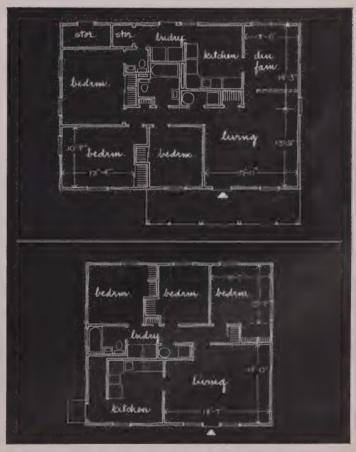
The second big change in this house in one National is making in all its 1957 models: the total depth is increased from National's former standard 24' to 28'. A truss spans the 28' dimension, so all interior walls are nonload-bearing and can be placed wherever best for the plan. The 28' depth also makes it feasible to shorten the length of the house to fit it to a narrow lot without crowding the lot line.

Price without land: \$10,900. Area: 1,126 sq. ft.



Entrance's two side windows give it extra importance in the design.

Plan (just below) shows how National centers plumbing in core.



Plan (bottom) offers three bedrooms in less than 950 sq. ft. of house.

# Here's a model aimed at the low-income market

"The money market this year has yanked the rug out from under the working man!" says Jim Price of National Homes.

So National is making a bid for this lower-income market with its \$7,500 (plus land) model shown here. Price believes that with currently available mortgage financing, this house is within reach of a nonveteran earning no more than \$71 a week. (Required income for veterans is only \$64 a week.)

The lower price goes hand in hand with reduced labor costs.

These are the result of increased factory fabrication (H&H, Oct. '56, p. 58). By extensive precutting, preasssembling, and prefinishing in the factory, National has cut expensive on-site labor time to 4½ days.

The second important fact about this house is that, as with the larger model (top of page) it will have a depth of 28'. Last year's models were 24' deep. Over-all size of this three bedroom model is 28'-8" x 32'-8".



One of five traditional houses added to the Scholz line is the Lake Forest, which will sell for about \$25,000 to \$30,000 plus lot.

1957 MODEL BY SCHOLZ

# Here's a surprise shift from contemporary to traditional



About 2,800 sq. ft. are provided in four-bedroom, 2½-bath plan.

Don Scholz is going back to his first love. His new models are almost exact copies of the traditional designs he was building conventionally before he started prefabbing contemporary houses in 1952.

The five traditional models which Scholz will sell in 1957 range in price from \$10,000 to \$50,000. The smallest is delivered in three completely finished sections on a special wheel carriage. It can be erected by crane in one day (page 134).

Scholz is also continuing his contemporary house line. He added the new traditional designs to broaden his market.



Plenty of space on one floor, avoidance of extreme style are stressed by Best Homes for this new and larger '57 model.

1957 MODEL BY BEST

# This large house aims at the growing luxury market



2,103-sq.-ft. plan offers hulf-bath in garage for children's use.

"All the recommendations" of the Women's Housing Congress (see H&H, June '56) are included in this big new ranch house.

That's the claim made by W. G. Best Homes for its Mid-America model, which will sell for \$27,500-\$31,500, plus lot. The company has been building in the \$8,000 to \$15,000 bracket. This wide price range, which skips the medium-price market, reflects Best's great flexibility in engineering and production techniques. (All its houses can be expanded in 2' modules.)



Improved design and a larger plan mark this new Thyer model. It has more open planning and living area faces to rear of lot.

1957 MODEL BY THYER

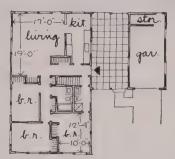
# Breezeway and garage make this house look larger

This model is larger than last year's and looks it. Though a basic rectangle, the garage extension gives this Starlighter model an L-shape look.

Buyers can have either the open breezeway or an enclosed family room. Gable or hip roofs range from 5-in-12 to 2-in-12 pitches.

Architect Thaddeus Hurd's design provides for a 10" drop siding on the front, redwood on interior walls, large glass areas for the living room at the rear.

Price of the 1957 Starlighter model: \$15,000 with lot. (Thyer expects to edge upward towards the \$18,000-20,000 price class.)



Three-bedroom plan has two baths, 1,200 sq. ft. of floor space.



Large windows, plenty of attic storage are included in this wholly prefabricated house which sells for \$10.28 per sq. ft. of floor space.

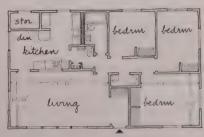
1957 MODEL BY GENERAL

# The whole house comes complete on one truck

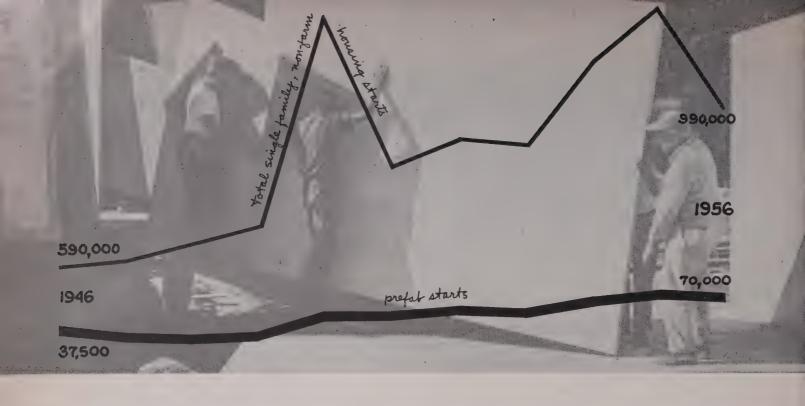
Here is the most completely prefabricated house on the market today.

Only 100 man-hours are needed to erect it from the time the truck brings the parts to the lot.

This new model, the Highlander, closely resembles General's only other model. The new 1,004-sq.-ft. house is 2' wider, a foot longer, has an extra half bath. The General Homes package includes completely finished walls (all wiring in), plumbing tree, cabinets, space heater, roof panels, etc./END.



Three bedroom house includes 1,004 sq. ft. and 1½ baths.



House & Home's 4th

# ANNUAL REPORT ON PREFABRICATION

The 116 prefabricators listed in House & Home's current directory\* will produce 70,000 houses in 1956—just about 7% of the year's single-family nonfarm starts.

By contrast, last year 88 of them turned out 93,000 houses, 73/4 % of 1955's comparable starts.

For 1957 the usually optimistic prefabbers are tempering their predictions (which in recent years proved to be two or three times actual) down to a modest 115,000 houses. Privately, most of them hedge even this figure. Best appraisal of their real hope: about 100,000 starts.

#### Why prefab did better than it looks

On the face of it, the 1956 reversal of prefab's trend toward a greater share of the total market called for an explanation. Prefabrication's friends were quick to offer one.

They pointed out that most (over 80%) of all prefab houses are financed by government-backed insurance and the 1956 mortgage crisis cut back FHA and VA starts far more than it did those financed by conventional mortgages. But—ran their argument—prefab house starts fared much better than the FHA-VA average.

The figures support the prefabbers' case: although their output was down 23% for 1956, total vA starts fell 32% and FHA starts tumbled 44%.

Perhaps one of the reasons the prefabbers were better \* Prefabbers listed in the directory include only those who market their products through builder organizations; this year's 40 or more producers of "shell" houses may have accounted for another 10,000 units. See page 174.

able to deal with the red tape of the government mortgage market was the part played by the larger firms and the services they were able to give their builder-dealers.

For in 1956 the 16 largest companies accounted for 55% of the year's total prefab production. The top 16: National, US Steel, American, Thyer, Inland, Pease, Scholz, Huber, Place, Richmond, LFI, Presidential, Page & Hill, Harnischfeger, Admiral, Best.

An unexpected source of sales this year was the bigger, higher-priced house market. Producers climbed the price scale (page 132) and tapped a second-time buyers' market that once belonged only to the custom-house builder.

The best-selling prefab models (page 140) were often these bigger houses. Prefabbers were preparing to build more of them next year and also to offer new low-price models in an effort to revive the low-cost market.

# New markets may help in 1957

Many prefabbers were bidding hard for a large 1957 share of the Capehart Act's 168,000 military housing units. Some were looking to motels, schools and clinics as a new outlet for production (page 137).

On the geographical sales front, prefabbers in 1956 were breaking out of their traditional Midwest stronghold, the so-called prefab triangle. The market was steadily moving East and as the market moved so did the plants (page 133).

In design, the prefabbers were ranging wide in an effort

to please all tastes. Though many new contemporary models were being introduced for the 1957 market, there was a noticeable increase in colonial houses and several firms fell back on features like scalloped porch valances or diamond windows (page 122).

But the big design news for 1956 was Frank Lloyd Wright's first prefabricated house (page 117), a design certain to swell the favorable publicity which prefabrication had in the shelter and home service magazines.

The prefabber's psychological "package" grew bigger because of the design, merchandising, financing, land purchase and sales helps that most prefabbers offered along with their actual house package (page 135). Prefabbers got professional help from ad agencies, market analysts, land planners as well as architects. The benefits were passed on to their builders in a better house for better sales.

The increase of over 1,000 builder-dealers (page 133) gave prefabrication new problems even as it helped solve some old ones. For the builders were demanding and getting more service, but prefabbers were hard put to find personnel to render it (page 159).

At year's end it looked to many as if the prefabbers had most of what they needed for the long pull.

They had plant capacity to produce over half of all the houses that are likely to be built next year. They were especially strong in that part of the market that depends on government-backed mortgage financing. Their factories had an edge over rising on-site labor costs and the growing shortage of skilled on-site labor. They had a record of success in winning public participation in their capital expansion. Their one great unsolved problem was how to get and train the manpower they needed.



Amish carpenter squaring up wall panel symbolizes prefab's new acceptance. "American Homes" reports Amish crew (traditionally wary of new ideas) prefers to work on prefabs over conventional houses.



### OF PREFABRICATION

Question: When is a house a prefab?

Answer: When the major, bulky parts of the house—in the main carpentry items like exterior panels, roof trusses or roof panels and preassembled or precut floor systems—are manufactured and packaged in a plant for shipment to the site.

**Question:** What's the difference between precutting and prefabbing?

**Answer:** Precutting is the first step in the manufacture of a house. In prefabbing the precut pieces are assembled at the plant.

**Question:** How is component building different from prefabbing?

**Answer:** In component building major parts of the house (like prehung doors, storage walls, roof trusses, wall panels, etc.) are selected by the builder and bought separately (often from several different makers).

**Question:** Do I have to be an established builder to become a prefab dealer?

**Answer:** No. But experience in a related field (like real estate) is helpful and success in some business venture gives you a greater edge.

Question: How much capital do I need?

**Answer:** Estimates run from \$10,000 to \$25,000. Ownership of land plus a good credit rating lowers capital requirements.

**Question:** Do I have to build only prefabs?

Answer: No.

Question: How do I buy a prefab?

Answer: Write on your letterhead to any one of the 119 prefab house manufacturers listed in the Prefab Directory, beginning on p. 174. The company will mail you literature and ask you to get in touch with one of its salesmen (he will probably get a carbon of the company's letter).

**Question:** Do I have to be close to a prefab factory?

**Answer:** Not necessarily. Most prefabbers will ship 250 miles (overnight trucking distance) but shipments of from 350 to 500 miles are possible.

**Question:** How do I pay for the prefab house?

**Answer:** Payment ranges from C.O.D. with a discount to a 120-day payment

(by which time you should have received interim construction payments from your bank).

**Question:** Can I mix the brands of prefabs I build?

**Answer:** Yes. But some manufacturers frown on this and at least one will not do business with you unless you build his house exclusively.

**Question:** How do I know prefabs will fit my local building code?

Answer: All prefab houses can pass a reasonable code. In some cases the manufacturer may need to show local building officials evidence to prove that his product meets or exceeds code requirements. Areas which discriminate against "prefabs" as such are disappearing.

**Question:** Do I use the same craft unions to build prefabs as for conventional building?

Answer: Yes. In some cases some crafts are eliminated at the local level (e.g., glazers) but your work crew will include carpenters, masons, laborers, plumbers, electricians and painters. Many have less work to perform.

**Question:** What is included in the prefab "package?"

Answer: Prefab packages vary with the manufacturer. Some ship only the "carpentry" of the house. Others put in not only wall, roof and floor panels, but plumbing pipes, stacks and fixtures, furnaces and air conditioning equipment, kitchen cabinets and built-in appliances, plus paint, wallpaper, rugs and all the necessary finishing materials, except brick. The most fully "packaged" houses consist of everything but the lot, land-scaping, walks and driveway.

**Question:** How long does it take to put up a prefab house?

Answer: A prefab with about 1,100 sq. ft. can be put under roof in one day with a six to eight man crew. Its completion time will range from two weeks to one month depending on efficiency and degree of coordination between sub contractors.

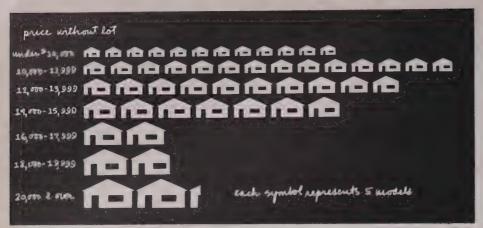
**Question:** What advantages are claimed for prefabrication?

Answer: Faster building time, less dependency on the weather, lower overhead, more control over material costs, faster turnover, less (and usually lower) direct labor, plus better design and merchandising and financing aids.

Question: What do opponents say is wrong with prefabrication?

Answer: Less control over the product, higher cost for materials, loss of time caused by parts missing from the package, failure to pass codes in some areas.

Annual Report >>>

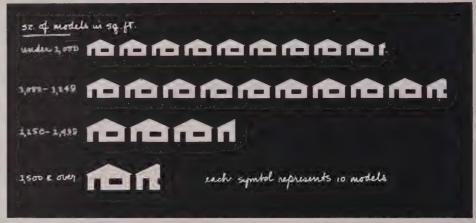


Price of all prefabs went up (see chart, left). The standout fact in the prefab market was the number of fast selling 1956 models priced above \$20,000. As the chart shows, except for the most expensive houses, the number of models decreased as price increased. But in the top class the sharp jump showed that people with a lot of money to spend were accepting prefabrication as never before: manufacturers were offering 11 actively selling models priced over \$20,000. In the volume market, the low-cost house moved up into the \$10,000 to \$12,000 bracket, where the most models were sold and sold the fastest.

87 firms reporting

### BIGGER, MORE EXPENSIVE PREFABS TOOK A LARGER SHARE OF THE MARKET

Size of prefabs increased (see chart, right). In 1956, for the first time, most prefabricated houses had over 1,000 sq. ft. of living space. More than 20% of the active models had over 1,250 sq. ft. of living space, a new high. While there was still a big market for small houses, it became increasingly difficult to qualify buyers for houses under 1,000 sq. ft. People wanted and needed more space and they were willing to pay for it. And institutional lenders became increasingly hesitant to put their money on models whose small size might make them undesirable family units in ten to 20 years, or even sooner in some markets.



87 firms reporting

# To meet buyers' demands prefabbers offered more space, more models



Variety of models made possible by use of prefabs is shown in this photo of Lincoln Village. Columbus, Ohio. Midwest Homes put over a dozen models in the project.

One thing was sure in 1956: buyers shied away from look-alike tracts and too-small houses.

There were hardly any two-bedroom prefabs on the market. And the only time you could sell look-alike houses was when your prices were the lowest for miles around.

Actually more different prefab models were available than ever before. Manufacturers reported 238 actively-selling models on the market. If a builder-dealer didn't find all the variety he wanted with one maker, he could add any number of other models from other manufacturers. Few prefabbers felt they could object to a dealer building houses of other companies—they were glad to sell anything.

#### More house for the money

In the low-cost market manufacturers like General Industries, National, Best, Thyer and American were making three-bedroom, bath-and-a-half houses that sold for \$10,000 to \$12,000 without lot. With better cost control, more ability to finance and helps for the builder, pre-fabbers stole a march over many builders of conventional low-cost houses.

Much greater acceptance of prefabbing by house buyers, let manufacturers move into the high-priced house bracket. Second-time buyers accounted for most of the increased sale of higher-priced prefabs, "Once a homeowner—always an expert" is no longer an idle phrase.

#### Second-time buyers are demanding

Dealers found more and more prospects who went through model houses asking about wall framing, roofing, plumbing and electrical systems. Usually they turned out to be second-time buyers who knew what they wanted and had the money to pay for it.

These buyers wanted and got much more of a custom-look as well as sounder construction. To meet this new demand many prefabbers have geared a large part or all of their production to the "custom" house.

Since manufacturers are now able to make almost anything the market wants, prefabbers have made significant inroads in new areas. In the once tradition-bound East, gains in acceptance were most evident.

More inquiries poured in from new areas, and some companies were swamped with questions from places they'd never heard from before. To see how acceptance of prefabrication spread, look at the map on the next page.



# Prefab sales are moving east faster than west

Five of the top ten states in prefab sales are now in the east.

But Ohio, Illinois and Indiana, where prefabrication got its first real roots, still continue to take almost half of total production. New York ranks fourth in the nation with Pennsylvania, New Jersey and Maryland standing 6th, 7th

and 8th respectively. Michigan, Missouri and Virginia are 5th, 9th and 10th in sales.

Prefabrication is also moving with strength into Iowa, Louisiana, Minnesota and Wisconsin. Georgia and Florida still hold a share of the market, and Massachusetts, Connecticut, North Carolina and Alabama are gathering momentum as good areas for prefabs.

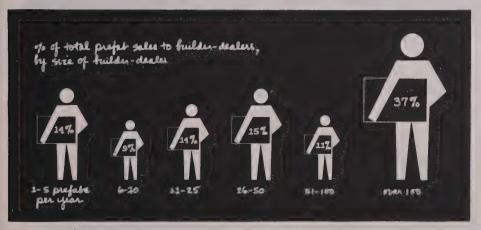
The great plains states and Nevada are major areas largely introduced by prefabbing.

#### Cost-control is big factor

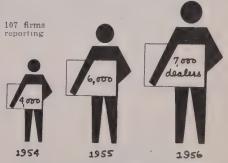
Prefab's speed, its control over costs and its financing helps are primarily responsible for opening up the eastern market. Rising costs in the east have reduced the edge that highly competitive builders and subcontractors used to have over prefabricators. The wide variety of designs now available in prefabs has also helped to break the east's resistance.

While the same factors apply to other areas of the country where prefab sales are building up, the east is important because of its population concentration.

As the map shows, prefab plant locations closely correlate with sales areas because overnight trucking radius still is the best maximum distance for prefabbers to ship. If a truck loads by day, travels at night and can unload first thing in the morning, both prefabber and dealer save money. Trucks are kept moving, plant labor kept busy and construction crews at the site are not waiting around at \$2.50 to \$3.50 an hour.



14 firms reporting



Prefabbers added 1,000 new dealers The chart shows the increase of new dealers slowing down in 1956: there was a 2,000 gain in '55 over '54, compared to this year's reported gain of about 1,000.

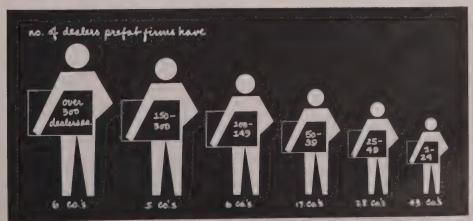
# Bigger builder-dealers are prefab's biggest market

As the above chart shows, the biggest part of prefab production in 1956 went to big builder-dealers.

This conclusion is based on a 14-firm sampling of sales patterns (sales of these representative companies total almost 30,000 houses in 1956).

Many small companies, as well as big ones, sold a major share of their production to high-volume dealers. Manufacturers point out that fast erection time and prefab cost control pay off best in large projects.

The fact that many firms sold a big chunk of their production to a few big dealers is also indicated by the chart at right. Some 43 firms had less than 24 dealers each to handle their production.



105 firms reporting

ALMOST HALF THE PREFABBERS HAVE FEWER THAN 24 DEALERS EACH

Annual Report <del>>>> ></del>



Power crane awaits truck at foundation.

Low-boy trailer is backed on site.

Middle section swings off trailer.



Section goes in place quickly.



Painted house, complete with all mechanicals, is finished by four men in a day.

# The small house package came more complete, but bigger models did not

This house (Scholz's new Belle-Aire model) was shipped to its site in three sections—with everything complete from carpet to plumbing.

The only work performed on site was the building of foundation, walks, driveway, landscaping, joining the sections together and hooking up electricity, waste, fuel and water lines.

Working from a completed foundation four men fitted the sections together, raised the roof—"built" the house—in one day. Licensed subcontractors made the utility connections.

#### Package eases labor problem

More fully fabricated than most models, this house is nonetheless a good example of the way prefabbers were attempting in 1956 to help home building get around the shortage and high cost of skilled field labor.

National Homes is another example of the same trend. This fall the company brought out a brand new \$7,500 model that cuts on-site labor to 4½ days (page 127). General Homes, Best, Inland, Midwest, and US Steel all now have lowcost houses in nearly complete packages.

Some prefabbers and many big builders were predicting that the fully fabricated small house might once again make the under-\$10,000 price bracket a big factor in the market, especially in areas where new industrial construction is creating a need for mass housing.

#### Builder favors big package

Les Taubman, big Detroit builder who plans to "go mobile" and build low-priced houses wherever industry is locating cites three advantages of the fully fabricated house:

- 1. In out-of-the-way places skilled labor is non-existent: you either bring it in or pick up unskilled labor.
- 2. The more complete the house when it is delivered to the site, the better the builder can control his costs.
- 3. New towns seldom have restrictive codes that outlaw the savings possible from new techniques.

But despite all the advantages of the complete package, many prefabbers found they had to compromise short of full fabrication in order to fit the package to the delivery truck. For low-cost houses, most prefabbers said, this means putting the whole package on *one* truck, even though that generally means shipping partly disassembled.

Truck size is an even more important limitation on package size for higher-

priced houses than it is in the low-cost field. Two trucks are ordinarily used to deliver the wood-carpentry, dry wall, roofing and kitchen cabinets for a 1,500 sq. ft. house with a two-car garage. Items like appliances, plumbing fixtures, storm doors and windows and screens can seldom be fitted in.

#### Big houses must compromise

In 1956 the prefabber compromised by making whatever he did deliver as complete as possible. For example, he preprimed or prestained his prehung interior doors and preglazed his exterior metal sliding units.

Codes also were still working against complete fabrication of the larger house. Big houses were usually shipped to established communities where restrictive codes veto techniques like precast or prefab plumbing.

Finally, prefabbers found that buyers of higher-priced models frequently wanted special features and other nonstandard items that made it impracticable to attempt to do the whole job on the factory production line.

So the size of the package for these larger houses remained mostly unchanged in 1956, and probably will change little more during the next year.

# Now there's more merchandising than ever in the "package"

Many a prefab builder-dealer would be quick to tell you that the merchandising help his prefabbers gave him in 1956 was one of the most important items in the prefab "package."

Point-of-sale kits like the one shown at right, decorating "packages" and advertising funds became standard items.

The model house was a sales must and many companies began to offer 90to 120-day financing to help their dealers get new models fast.

Some prefabbers started employing professional decorators to specify just the right furniture for each model. Sometimes they arranged for the dealer to get the furniture at large discounts through local outlets. (Many builder-dealers report that when local stores decorate models, the house often has to compete with the furniture.)

Prefabbers also put their advertising agencies to work helping local dealers. Mats for newspaper ads, copy for spot radio announcements, publicity releases, brochures were frequently furnished.

Many manufacturers made their dealers an allowance for local newspaper or radio advertising—provided the maker's name was used in the advertisement along with the dealer's.



Point-of-sale kit includes direction signs, balloons, brochures, placards and ads as shown.

# Prefabbers gave dealers more help with their financing, land and sales



#### HOW THEY HELPED FINANCE

In this tight money year most companies took advantage of their size to set up financing plans that insurance companies and other big lenders felt they could safely take part in. The great majority of manufacturers offered help ranging from securing money from investment syndicates down to negotiating mortgages with local correspondents.

Some companies occasionally even took over the whole money job for dealers: supplying funds for everything from site preparation to permanent mortgage including the cost of labor. Only 25% firms gave no special help to dealers.



WHAT THEY DID ABOUT LAND

Every year the problem of land gets tougher, and this year almost two-thirds of all prefabbers helped dealers get sites.

Prefab salesmen spent a lot of time hunting for land and setting up deals for their builders. Some companies handled all the financial and legal details. In some cases prefabbers even moved dealers into new areas where they had found land.

Many prefabbers did the site planning for their dealers after engineers had made topographical surveys. This service often included planning color and exteriors to insure variety in the houses.



116 firms reporting

#### HOW THEY USED ARCHITECTS

The architect's help was a major factor in moving prefabs into the market for larger, higher-priced homes.

Over 75% of prefabbers retained registered architects to design their houses and credited them for a large part of prefabrication's new public acceptance.

The shift to larger houses (where buyers had more to spend for what they wanted) meant more custom prefabbing and more special changes in the package. With architects on their staffs, prefabbers easily handled a greater number of models and wider flexibility in plans that their new market developed.

Annual Report >>>

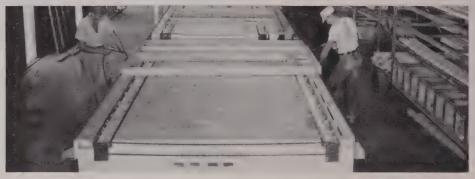


New 50-acre site of Wilson Homes plant north of St. Louis is on old airfield. Offices (left), main plant (right center), material storage (right).

# Here's how production line works to turn out houses in a new prefab plant

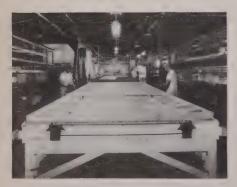


Framing is cut by three radial saws feeding to a conveyor that carries cut material to a point where it's stacked up on pallets.

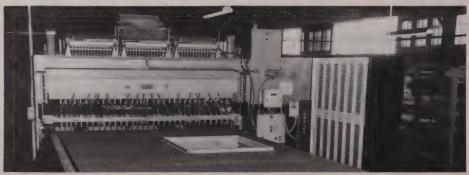


Assembly jigs for interior partitions have rotating arms at either side fitted with lugs to space studs and cripples for a wide vari-

ety of panels. Arms are rotated to bring a new pattern of lugs in position for a new panel. Lugs are welded on steel pipe arms.



Exterior wall assembly jig shows link chain (foreground) controlling rotating arms as in the interior panel jig table, above right.



Nailing machine fastens insulating sheathing on outside wall framing. This machine, which cost \$50,000, has 3,400 switches,

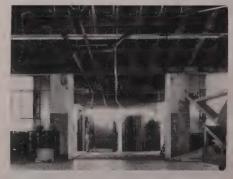
right, that can set 14 different nailing patterns for as many different wall panels. The nailer is by Food Machinery & Chemical.



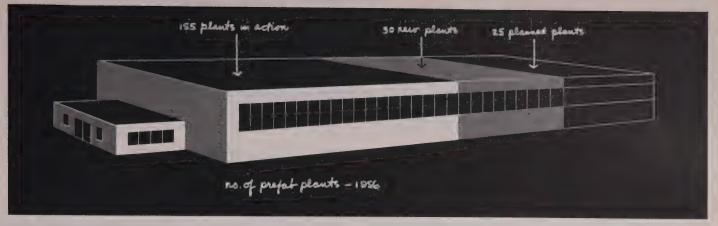
Material racks, background, are on wheels. At night they're moved out to the storage sheds and loaded for next day's production.



Truss jigs space members for nailing metal gussets exactly. Right rear, trusses are placed on dollies and banded for shipping.



Overhead loading rails carry panels to trucks. Rail ends are hinged to swing from one truck to another in loading dock, rear.



Clear section of pictogram represents existing prefab plants, gray tone indicates new facilities, unfinished part is for future plans.

# Prefabbers now have big plants, but still lack manpower for real boom

As the pictogram shows, by 1956 prefabrication had ample plants to take care of a big gain in sales.

With over \$55 million already invested in plant and equipment and another \$5 million slated for the next few years, the prefabbers have enough machinery to produce about half the single-family dwellings required in a "normal" year.

The limit on prefab's growth potential is its shortage of trained personnel. No one is more aware of this than the prefabbers themselves; during 1956 they continued to raid each other as the quickest way to get trained people.

As a result it is not unusual to find sales executives who have worked for three or four of their present competitors. Production personnel are also on the move: one production man applying for a job with a new company made special note of the fact that he had bossed production for three other prefabbers. Executives to head and staff the prefabbers' mortgage or acceptance subsidiaries are practically nowhere to be found.

#### Firms raid each other

Prefabbers also raid each other for dealers. This problem is a direct result of salesmen shifting from one company to another: invariably they take some of their old customers over to the new company. So the old company has to find and train new dealers as well as new salesmen and as often as not starts another round of raiding.

Good salesmen are invaluable, but, says one prefabber, "Today we don't need to sell nearly so much as we need to service." Here's why:

Prefabrication is now adding almost as much value to its product through better design, financing, color control, merchandising helps, and the like, as through the shop-cutting, assembly, and packaging of the house itself. All of these services require a trained staff of specialists 'and executives. In fact, groans one prefabber: "It's even hard to find a good advertising agency that understands the building business."

To overcome the shortage of experienced people, this year several more prefab firms set up formal training programs. One of the pioneers in this field is George A. Cowee Jr., vice president in charge of sales for National Homes. How Cowee's training course works, as reported by one graduate of the program: "After a couple of months you start

wondering what's the matter with people that they aren't all buying prefabricated houses."

Despite all its problems in 1956, prefabrication continued to grow in maturity. With more people investing in the stock and more industrial leaders becoming directors of the companies, prefabbers were gaining a wider acceptance which will, they hope, help them find more personnel as well as more sales.



# Prefab motels like this are going up all over US

In 1956 prefabbers found new outlets in two booming markets

They are: (1) The motels to go with the nation's \$33 billion of new highways and (2) the schools that almost every US city needs today.

Fairhill, Inc. of Memphis is a case in point. Their trucks (shown in the photo above) delivered a 35-unit motel to a site alongside a Mississippi highway where it was erected in one day. Like many other prefabbers, Fairhill was alert to the motel market even before the fed-

eral highway program was voted, now has orders on hand for several motels.

Prefabbers are no longer restricting themselves to wood or one-story buildings. National has a two-story college dormitory in the works. Both US Steel and Scholz have engineered two-story rigid steel frame units that lend themselves to a variety of applications, including schools, apartments, stores, even hospitals. The need for fireproof structures is forcing prefabbers to look into the possibilities of working with metal. / END

William Wollin Studios





# "I SWITCHED

# TO PREFABS"



"I've found prefabrication a more efficient way of building. It gives me more time for the *business* of building," says Grant Kittle of Madison, Wis.

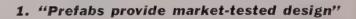
Now 33 and president of the Madison builders association (NAHB affiliate), Kittle started building after graduation from the University of Wisconsin School of Commerce where he studied Light Construction and Real Estate. He says, "I found a good deal of the material I learned in commerce—two thirds of my four-year course—more than helpful in the building business. Marketing, labor management and accounting helped most." One-third of Kittle's courses were in engineering.

Kittle built conventional houses first, averaged 11 houses a year for three years. The next four years he built prefabs and brought his average up to 20.

Getting a late start this year (July) because he was completing a contract on a campus dormitory, Kittle nonetheless produced as many houses (19) in the second half as he had produced all of the previous year.

"Dealing with a prefab company is just like having a first-rate counselor on your management team. Sometimes you can't see what's going on right in your own backyard. I had my mind changed about what size and price house was selling by the visits the company salesman paid me. I moved up to \$15,000 and \$16,000 houses this year. Next year I think it probably will be \$20,000 houses.

"Frankly, I'd have gone crazy trying to build FHA or VA houses without the prefabber's help."



"When I built conventionally, I built the kind of house I liked—on speculation. It surprised me how far away I got from what the public wanted. I spent most of my time redoing houses to 'personalize' them for customers. With prefabs I get market-tested design. A small-volume builder doesn't have the capital or staff to experiment with design. Two or three errors can break him. Experienced professionals know what the market wants."







# 2. "Prefabs let me grow with a small staff"

"Prefabrication is my way of getting into volume while keeping my supervision and overhead—always a fixed item—down to a minimum. My total labor force is five or six carpenters and one or two laborers. I've got one foreman-supervisor. Because I don't have to spend too much supervisory time myself, I can give more time to administration, merchandising, selling and accounting. Speedier building helps me turn over my capital faster."



#### 3. "Prefabs save me 5% over conventional"

"Based on my experience in conventional building, I figure I save 5% building the prefab way. I don't save the 5% on every house, but when the year is over I can check my books and find that much. I save on direct labor, use less supervision and have practically no waste in materials. Fewer troubles, less overhead account for the rest. I use a crane because I can hire it by the hour. It keeps my crew fresh to set trusses after the walls are up."



#### 4. "Prefab salesman is like one of my staff"

"A visit from Elmer Swanson, the Thyer salesman who services my account, is always a big help to me. He sees other builders all the time and picks up techniques that he passes on to me. He knows the product as well or better than I do. He's around for our model house openings, even brings his wife. He birddogs land for me. He knows what financing is available. He's johnny-on-the-spot whenever I need him—for any reason."



### 5. "Prefabber offers me merchandising aids"

"How could a small-volume builder possibly afford all the merchandising material the prefabber supplies? I get handout literature, open-house signs, arrows, phonograph records, color photographs, stickers, publicity releases and newspaper ads. I can get as much material as I want and fit it to one house or 20 houses. This merchandising material is professionally prepared, something I'd find hard to match even if I could afford it."



### 6. "Prefabs assure steady material supply"

"As long as I've built prefabs—four years—I've been able to get materials when they've been in short supply for other builders. In the summer of '55 it was gypsum dry wall. Sometimes it's Thermopane. Sometimes it's the right kind of lumber. I've never been caught short, or, more importantly, delayed for lack of materials. And it's never cost me a nickel if I was shorted on a delivery. The salesman makes sure of that."



#### 7. "Prefabber thinks up promotion ideas"

"I would never have thought of some of the promotions I tried—nor would I have had the time to put them on by myself. Last summer I built a house under lights. We chose the evening so husbands as well as wives could see how our houses were built.

"We attracted thousands of people we never could have attracted otherwise. Of the several, I tried, it was my most successful promotion."/END

# 17 PREFABBERS PICK THEIR SALES LEADERS

This year you could get almost anything you wanted in a prefab house, but the one thing most people looked for was: *more space*.

So big split levels, ranches and two-story houses got a much bigger share of the market than in 1955. In small houses, offsets were added to living rooms to make L-shaped models which sold better for more money.

The 17 houses shown here and on the next five pages are a good cross-section of what the prefabrication industry was selling in 1956.

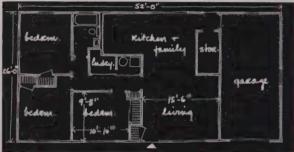
Each house was named by its maker as his sales leader. House & Home publishes them as a fair, random sample of top selling houses, not as a rating-list of the year's best sellers.

# New Century: the hip roof makes house look bigger



Many of today's buyers seem to favor the more gradual lines of a hip roof. The sloping roof-line of this fast selling small house gives it an illusion of greater length than it would have with gables.

New Century offers this board-and-batten model in either standard framing or stressed-skin plywood and with more than a dozen variations. In this version, with a big open living-kitchen-family area, it totals 1,040 sq. ft., sells for \$10,750 without lot and garage.



# Richmond: people like the porch on this model



More and more people want "three dimensional" fronts on their houses. Richmond finds that porches, brick walls and dado bring buyers out to see the house shown here.

When buyers get inside this house they find the answer to a growing family's needs: four bedrooms and 1½ baths. A storage room and plenty of closet space are sale closers.

Called the Champ, this best seller has 1,165 sq. ft., retails at \$11,200 without lot.



# Midwest: two stories give buyers space they want

This New England salt box house is selling fast in Ohio, and for a good reason: it provides 1,629 sq. ft. for \$18,500 (without lot).

A fourth bedroom can be added to the 3-bedroom-and-storage second floor. A generous-size family room (almost a "must" in this price class) and a separate dining space are included in the big first floor.

Centrally placed closet is the only divider in open dining-living area.



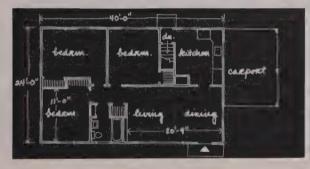


# Inland: the picture window opens up the facade

Buyers like the trend to more glass, whether in contemporary or traditional models. Sales are built into this 960 sq. ft. house by the nine-light window which opens up the 20' long living-dining area.

To get shade, Inland uses the appeal of wide (2'-8") overhangs front and back. The basic house retails for \$10,500 without lot.

Since basements are almost a must in Inland's market, one is provided: The staircase leads to lower level recreation area.

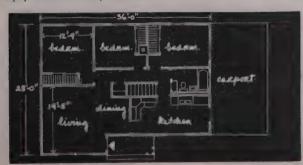




# Harnischfeger: a small house gets an L look

An L-shaped house always looks bigger than a rectangular house, and a few changes can give an L-look to a rectangular house. Harnischfeger made this house their best seller by adding a simple jog to the living room wall. Then two hip-roof sections were added to accent the L-shape. A porch, vertical and horizontal siding and big picture window complete the treatment.

With three bedrooms and a big kitchen, this 930 sq. ft. model sells for \$12,200 without lot.



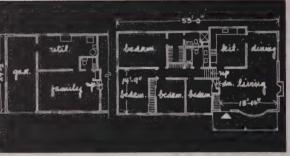


MORE SALES LEADERS ----

# Presidential: the top price model is tops in sales



This 1,950 sq. ft. house retails at \$16,000 (without lot) and outsells Presidential's low-cost models. In the new trend to higher-priced houses this model tells a story. It gives the buyers lots and lots of space; four bedrooms, 2½ baths, family living, and dining rooms. Plus generous closets. Presidential made it a split because a split gives the most space with the smallest traffic pattern. The model has a touch of New England in its exterior.

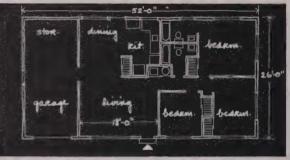


# Huber: this big hip-roof house sells for \$12,000



Three bedrooms, two baths and 1,040 sq. ft. in this low-cost house made 1956 sales history in Dayton.

The houses outsold everything within reach and buyers got more than space, their number one requirement. For two examples of what else they got: today's popular sweeping hip-roof and Dayton's almost "must" brick exteriors. Huber achieves variety in the appearance of his houses by using different looking brick from 25 suppliers.

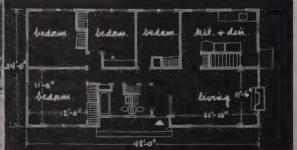


# Page & Hill: four bedrooms meet today's market



At \$13,500 (without lot) this house brought in families by the dozen. In 1,120 sq. ft. Page & Hill worked in not only four bedrooms, but give a bathand-a-half, a kitchen big enough for family meals and a 22' long living room.

In an area where buyers insist on basements, dealers offer a fireplace in a lower-level recreation room for only \$100 more than cost of the "extra" first floor fireplace. Garages cost \$800 to \$1,000.



# Pease: colonial treatment comes back strong

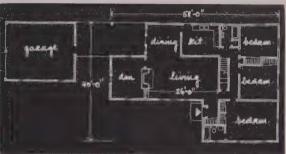


A front-runner in the high-price market, this clapboard model sells fast at \$20,000 without lot.

Placing the garage in line with the L-shape makes the house look bigger and gives it its colonial look. Breezeway division between house and garage is an attractive break in front elevation.

attractive break in front elevation.

Inside the 1,463 sq. ft. house, the bedroom hall gives direct access to the kitchen. A study off the 26' living room is well away from daily activity.



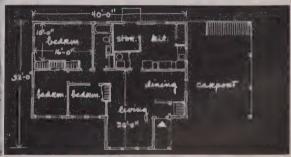
# US Steel: here's a popular two-zone plan



A functional use of a living room offset makes a definite split between living and sleeping area.

The L-shaped daytime area does more than zone the house. It also gives buyers the more interesting exterior they look for today's house. Offset has big bay window, makes the whole house look larger.

The lacquer finished plywood of the stressed-skin panels makes a warm and light interior. The 1,054 sq. ft. house sells for \$11,750 without lot.



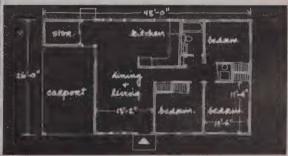
#### Best: flat top carport saves extra roof cost



Every nickel counts in today's market, and Best saved their buyers a lot of roof framing by stopping their gables at the side of the house. But they kept the long look by carrying the eaves line out over the carport and storage unit.

The 1,000 sq. ft. house is sold retail at around \$10.500 without lot.

Typical of Best's popular models, this house has an open kitchen-dining-living area.

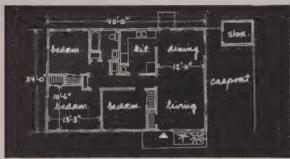


MORE SALES LEADERS-

# Thyer: 12 different exteriors sell one basic plan

A builder can use 3-12, 5-12, hip or gable roofs interchangeably on Thyer's best selling three-bedroom house. He can get even more variety in his project by different exterior treatments with brick, wood and fiber shingles and bevel siding.

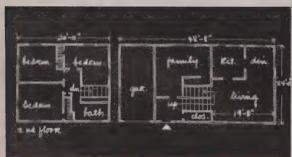
The trellis work under overhang and window boxes can be used to vary the front elevations for individual sales interest. The 958 sq. ft. house sells for \$9,500 without carport or lot.





# Maryland: three roof lines do the trick

Today's market likes a horizontal emphasis and Maryland housing gets it in this fast selling split with three roof lines. The two-story section, that might otherwise look tower-like is spread out by the mid-height overhang. Roof over the living room, right, midway between the other two roof lines, seems not only to stretch the house lengthwise, but also deepens it by giving this wing a setback look. The 1,344 sq. ft. model sells for \$15,000 without lot.

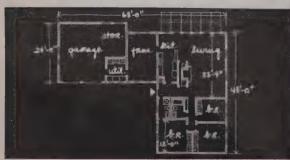




# Scholz: the exterior is almost a signature

Buyers get the best of Scholz' two-style treatment in his all-time best seller, Rocky River. While the front has the traditional porch and diamond window, the house opens up with a big contemporary interior. The open living-dining-kitchen area looks out through big glass walls to a rear terrace.

Bath at the front entrance serves guests as well as the master bedroom. The big 1,750 sq. ft. model sells at \$25,000 without lot.





#### Modular: sweeping roof line is the secret

A roof that makes this house much more than just a basic plan also makes it a best seller.

This 1,170 sq. ft. ranch is turned into a contemporary because the roof permits a high open beam ceiling, wide overhangs and window walls. At the back of the house the roof sweeps out over the carport and big storage unit to pull them in as integral parts of the house.

The house retails without lot at \$16,300.

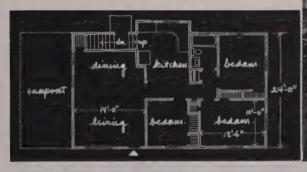




#### Wilson: the big kitchen is the big feature

Many families want big kitchens, and in this 990 sq. ft. model Wilson extended his kitchen past the rear of the house to seat the whole family at breakfast and lunch. Wilson's big kitchens are strong sales points in all his models.

More weight is also given to the outside of this small house by its wide overhangs and the trellis beside the front door. With full basement, it sells well at \$12,200 without lot.

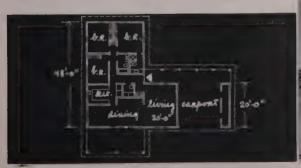




#### Fairhill: the open L-plan is a hit in the South

In Memphis this big contemporary is a best seller in a tradition-conscious market. The big 1,700 sq. ft. model brings in buyers with its open living-dining area, glass walls, beamed ceilings and deep overhangs. The exterior can be varied with horizontal and vertical natural wood siding.

Living is divided from sleeping area by utility cluster. The three bedrooms and two baths are big and generous. The house retails at around \$19,000 without lot./END.





S. Ashen-Brenner Studios

## Question: What kind of houses do big prefabbers live in?

## Answer: IN THE WORLD'S BIGGEST PREFABS

(and they assemble them out of standard parts)

For example:



#### Midwest's president John Morley built this luxury house



And he used

panels and components

just like those in

this regular production model



Family-room-kitchen has scissors truss ceiling. The white pine walls are from a 90-yr. old barn.

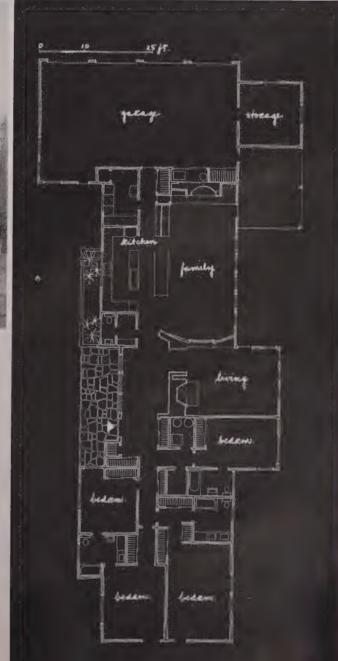


When John Morley wanted a new house for his 80 acre farm outside Mansfield, Ohio it was both logical and practical for him to build it of standard parts from his Midwest Houses. Midwest's architect John Highland put it together out of what was essentially four regular prefab houses.

"This way of combining component parts will catch on more and more," says Morley. "We saved money because we knew what we were doing. After our slab was in, a five-man crew put up the walls and sheathed the roof in two days."

The system Morley used has worked well for other prefab presidents. The houses of three who have built this year are presented on the following pages. They, too, show that prefabrication makes sense for large as well as small houses.

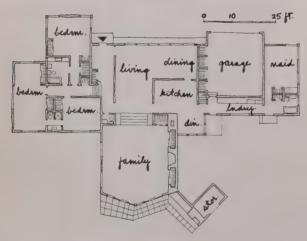
Long rectangular house (plan, left) was tailor made out of standard parts for the Morleys. Oversize garage is at left (top) then service area, kitchen-family room, formal living, bedrooms in 4,600 sq. ft. house.





Terrace wing with glass-gabled family-room and outdoor kitchen was nonstock. But all parts are now regular catalogue items.

#### This glamorous house belongs to New Century's John King



Plan shows a basically rectangular pattern plus one wing.

New Century Homes has always built a high proportion of special-order houses. This big one for its president is the largest the factory has ever turned out, but it involved no difficult problems. Even the nonstock walls and roof for the oversize family room were easily designed and fabricated.

An interesting by-product developed from it: a Terre Haute doctor, reading House & Home's prefab issue last December, noticed that prefabbers were building big houses and got in touch with New Century. The doctor had spent \$3,000 on house plans but had junked them when bids came in far above his budget. King showed him this house and the doctor decided it was just what he wanted. Duplicated with minor changes, the house cost the doctor about \$52,000, plus land and special appliances—far less than the bids for his earlier design.



Formal living room is at front of house, and like kitchen and bedroom areas, has flat ceilings, stock windows and walls.



Family room is five steps up from formal living room as house has been built on gently sloping ground.



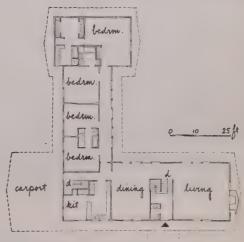
Long, L-shaped house has narrow end to street, which is at right in photo above. Porte-cochere acts as a second carport.

#### Richmond's Charles Travers prefabbed this handsome house

This roomy, comfortable house not only gives the president of Richmond Homes an attractive place to live in but it has become a merchandising lesson to his salesmen and builders.

Although it was finished only a few months ago, the house has already served as a prototype for a second house which has been put together out of Richmond parts. While Travers thinks Richmond's bread and butter will always be its smaller houses, a few luxury models like this raise company prestige, let people know that prefabs can be big and impressive.

In houses like this there are also lessons for custom builders. Components are less expensive simply because they are stock parts, often duplicated. But the real saving is in time. While most big houses take eight months to a year to build, these can be finished in less than half that time.



Plan separates living and sleeping areas. Architect: John Gerard.



Suntrap patio is formed by two wings of house. This whole area is being developed into a California style garden.



Living room is on far side of stairs leading down to entrance hall. Stairs continue to the family room under living area.



Covered porch outside family room is one of several outdoor living areas planned for intimate family use and for big parties.

#### Biggest prefabber, Jim Price of National,



Paved entrance court gives impression of a sunny glade in the woods.

Prefabrication's No. 1 salesman now lives in prefabrication's No. 1 house—No. 1 in size and luxury.

Never has a salesman had a more glamorous sample to show his customers.

Jim Price leads visitors around his house with justifiable pride. "This shows what you can do with panels," he says. "You can build anything that money can buy—and do it much faster. We built this in two months and ten days. Usually a house of this size would take a full year or more."

Equally proud is Architect Charles M. Goodman. Did the use of prefab parts hold him back? "Not at all," he says. "You dominate the component—it doesn't dominate you. From these parts an imaginative architect can design anything.



Gardens and patios were designed by Goodman with same painstaking care he gave house, which he sited to save every possible tree

#### builds the biggest prefab of them all

"This is a custom house built on a chassis of mass-produced, standardized components. The plan, however, is designed for the specific living requirements of a particular family."

The big house has 5,200 sq. ft. of enclosed space plus a garage, two porches and about 1,000 sq. ft. of storage. Panels have gypsum wallboard on the inside, Douglas fir plywood sheathing on the outside covered by cypress siding or oversize, handmade bricks.

Cost of house including \$12,000 lot was around \$125,000, but less expensive bathrooms, built-ins, special fittings would reduce price to \$90,000.

continued on next page

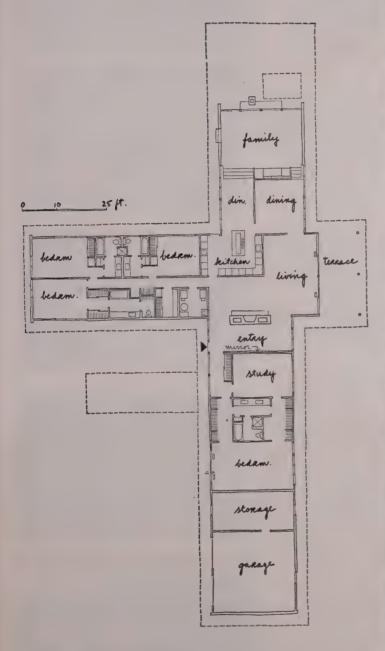
Formal entrance (right) adds both dignity and importance to the house.

Photos: Hedrich-Blessing





## Jim Price's kitchen is at heart of house, equally accessible from all three wings



The Price house is divided into three zones: parents' area (wing projecting toward bottom of plan); children's wing and room for guests (wing projecting to left) and common space of living, dining and kitchen areas. Thus both of the college-age children can entertain their own friends, and parents can entertain, without disturbing other members of the family.

Handsome kitchen is forerunner of Frigidaire's new line of kitchen components. Goodman designed the island cooking; communication center. Back splashers are mirrored./END.

Breakfast room (right) is between kitchen and family room. Window wall is of standard construction, faces south to one of many patios.



Formal entrance hall has an enormous mirrored wall, at right above.



Living room is L-shape, as plan shows, is on rear side of house.



Family room (above and at top of plan) is close to kitchen, opens to big porch.



In celebration of its Centennial in 1957,

#### THE AMERICAN INSTITUTE OF ARCHITECTS

is sponsoring a program of

### HOMES FOR BETTER LIVING AWARDS

As in 1956, House & Home magazine and the NAHB will cooperate in the new HOMES FOR BETTER LIVING AWARDS program. This time, BETTER HOMES and GARDENS magazine and NBC will also participate. Thirteen other national organizations listed below will also cooperate in the program. Some of the award winning houses in the 1956 program are shown at right.

Purpose of the program to pick the best houses of the past two years—both custom-built and mass-produced—in four eastern regions of the US (see rules). The houses will be chosen by a distinguished jury of architects, landscape architects, representatives of the home building industry and by the editors of House & Home and Better Homes and GARDENS.

Among the members of last year's jury were Architects Pietro Belluschi, Charles Goodman and Clarence Stein: Builders Joseph Haverstick and Earl Smith; Edifors Mary Hamman (LIFE) and Proctor Mellquist (SUNSET).

#### Here are the principal conditions:

You must send in your entry slips before February 15, 1957.

Use form on page 136.

Your entry must be postmarked before midnight of March 30, 1957.

The house you submit must be designed by a registered architect but it can be submitted by the builder, owner or the architect so long as the others involved agree to its submission.

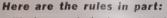
And you must follow the program rules in submitting your entry. The rules (in part) are printed below.

Because of the AIA Centennial celebration, the award-winning houses will be given the widest possible publicity: they will be exhibited at the AIA Convention and at the National Housing Center. They will be published in the participating magazines. They will be publicized on radio and TV and in the national and local press.

Very little time remains for photography. So send in your entry slip today.

#### Cooperating associations:

American Bankers Association American Society of Landscape Architects Institute of Life Insurance Mortgage Bankers Association of America National Association of Home Builders National Association of Mutual Savings Banks National Association of Real Estate Boards National Retail Lumber Dealers Association National Savings & Loan League Prefabricated Home Manufacturers' Institute Producers' Council, Inc. US Savings & Loan League US Chamber of Commerce



- The houses submitted must be built since January 1954, and located in: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, Puerto Rico, Virgin Islands, Canal Zone, New Jersey, Pennsylvania, Delaware, Maryland, West Virginia, District of Columbia, Virginia, North Carolina, South Carolina, Georgia, Florida.
- Awards will be made in two major categories: 1. Houses designed specifically for an individual owner, divided according to size:
- a) Under 1,600 sq. ft. of living space.
- b) Between 1,600 sq. ft. and 2,800 sq. ft. of living space.
- c) Over 2,800 sq. ft. of living space.
- 2. Houses designed for a merchant builder and sold speculatively, divided into three classes:

- a) Under \$15,000.
- b) \$15,000 to \$20,000.
- c) Over \$20,000.
- All notifications of entry shall be submitted on the entry slip printed on p. 236, accompanied by a check for \$10 for each house entered. Mail to "Homes for Better Living Awards," c/o American Institute of Architects, 1735 New York Ave., N.W., Washington 6, D.C. A separate entry slip shall be submitted for each project entered. Additional slips are available from the AIA, HOUSE & HOME and BETTER HOMES AND GARDENS.
- All entries must comply with the regulations listed in the program. The program is also available from the sponsor and the principal participants, and will be sent automatically to anyone submitting an entry slip.















## WASHINGTON'S BEST KNOWN SECRET



Today's best known secret in Washington is a sensational "foreglimpse" of future housing needs. Every one in the know has read it in mimeographed form; every one in the know is talking about it and arguing about it; now House & Home is proud to print it for the first time on the pages which follow.

Its anonymous author is the best informed housing expert in official Washington. He calls it an "exercise" because "there are too many delicate assumptions involved to classify it as a forecast or even a projection." But as an exercise, he says, "It helps to bring out certain logical implications that may be expected from current trends."

#### Most sensational of these "implications" are:

- By 1960 America will have an enormous surplus of low-cost housing even if no more low-cost units are built.

  To be precise, the 1960 surplus of cheap housing will be 4,580,000 units if we assume that each family will choose to live in a home worth roughly one year's income. See
  - **Table 6** page 158. The surplus will be very much bigger if we assume (as FHA usually does) that a family can afford a home that costs a little less than two years' income.
- 2. Because of this great surplus of low value units, price declines in the lower price range "will probably be large." This will make it harder than ever to sell cheap new houses.
- 3. In the higher price ranges demand will be very strong.

Perhaps the best thing House & Home has done for its readers has been to warn them again and again (beginning as far back as October 1952 with the Round Table report on the Too Cheap House) that the market for cheap houses would soon be overbuilt, but that an enormous new quality market was opening up for builders smart enough to offer home buyers a very different and much more atttractive house.

Much of the time House & Home has been alone in warning its readers they must learn to sell the quality market if they want to continue in home building. Now the Government's No. 1 housing economist is saying the same thing.

On the following pages you will find the "exercise," printed in full except for a few sentences left out to save space. The headlines are ours; so are the comments interpolated in italics. And we have changed the order to let readers who do not want to wade through all the statistical calculations get quickly to the point.

(continued)



## This expert study of future housing needs suggests big changes in US housing policy

Says the anonymous author in conclusion:

What light does all this shed on current public policies in the housing field? The following points stand out:

- 1. The emphasis on the "minimum house" which has dominated public and private policy in housing (and still does) is about to become obsolete. Existing housing, adequately maintained, will soon provide plenty of minimum housing of acceptable standards and still leave the country with a huge problem of converting and demolishing a large part of the existing stock.
- 2. The emphasis on public housing will probably decrease. (This is a very cautious understatement. The "exercise indicates that in 1960 there will be 21,730,000 dwelling units available with a capital value of \$5,600 to \$5,700 of 1953 value (\$5,000 of 1950 value—see Table 4 p. 158. But this country is wiping out poverty so fast that by 1960 there will probably be less than 3,000,000 nonfarm families left with family incomes under \$3,000.—ED.)
- 3. The emphasis on urban rehabilitation as contrasted with slum clearance will grow.
- 4. The FHA and VA programs are due for radical and fundamental redesign to remove or reduce incentives for the "minimum house" and to increase incentives (a) for better quality new construction with more living space and amenities, and (b) for upgrading existing housing.
- 5. The 30-year amortization may have to be curtailed for the "minimum house" (because minimum houses will probably depreciate so much faster than better houses that minimum houses will probably be worth less than the mortgage balance for the first 15 years of a 30-year low-down-payment loan).

## The big new demand for housing will come from upgrading and faster obsolescence

Some of the market implications of this foreglimpse are:

1. In the lower price ranges, where supplies will be very large compared with demand, declines in value will probably be large. In the higher price ranges, where demand will be very strong, price declines should be small or absent altogether.

If the 2% depreciation rate assumed (in the calculations at the bottom of page 159 **Table 11**) is about right on the average, the rate in the \$15,000 and over group might average only 1%, and that in the \$5,000 to \$10,000 group 3% or more. In view of the plethora of structures in the "less than \$5,000" group, their market prices are likely to reflect mainly land values and suitability of the sites and structures for upgrading or conversion to other uses.

- 2. Just to keep up with net new family formation, an annual rate of 1,100,000 starts would be sufficient in each decade up to 1980.
- 3. The large growth indicated in the demand for residential construction will be in response to obsolescence of existing housing rather than growth of households.

-	Decade	Increase in households	Gross additions to housing stock demanded
	1950-1960	9.4 Millions	15.8
	1960-1970	8.5	11.7
	1970-1980	10.2	20.1

Table 1

Obsolescence shows up as being very heavy in the current decade 1950-1960, probably reflecting in part the extraordinary volume of low-value makeshift housing units that were registered in the Census of 1950. Some of this large number may be traceable to the low level of residential construction activities during the decade of the 30's and the first half of the 40's. The surplus of unwanted units standing in 1960 will

not be greatly increased during the decade of 1960-1970. A surplus of large proportions, however, will develop in the decade 1970-1980. It will exist predominantly in the \$5,000-\$10,000 value category of the 1950 Census, the category that includes most of the "minimum housing" erected under the stimulus and spiral incentive of national policy immediately following the war.

- 4. Only part of the demand for better quality housing will be reflected in "starts"—that is, completely new construction. Part of the demand will be met by rebuilding and upgrading the existing housing stock, so not all of the units that appear as "surplus" in the table at the bottom of this page (Table 3) will be demolished or vacant, and not all of the gross additions will be new.
- 5. In each decade, as can be seen from **Table 2**, a larger proportion of the high-valued units demanded than of the low-valued must be met from new construction (obviously, construction under \$5,000 is neither needed nor possible.—ED.)

#### PROPORTION OF DEMAND TO BE MET BY NEW CONSTRUCTION EACH DECADE, 1950-1980 BY VALUE

Decade	Value at end of decade	Demanded (end of decade) Number in thousands	Supplied by new constr Number in thousands	ruction (during decade) Percent of demanded
1950 - 1960	\$ 5,000-\$ 9,999	15,980	6,650	42%
	\$10,000-\$14,999	7,540	4,600	61%
	\$15,000 and over	5,840	4,590	79%
1960-1970	\$ 5,000-\$ 9,999	18,900	4,980	26%
	\$10,000-\$14,999	8,910	3,170	36%
	\$15,000 and over	6,910	3,520	51%
1970-1980	\$ 5,000-\$ 9,999	21,150	4,690	22%
	\$10,000-\$14,999	12,550	5,760	46%
	\$15,000 and over	13,680	9,670	71%

Table 2

## Housing demand is shifting sharply upwards; by 1960 we will have far too many cheap homes

With larger household incomes, people in general will want much better housing than is provided in the "less than \$5,000" category if their spending for housing as compared to other outlets of expenditures remains the same as in 1950 (i.e., if we assume people will continue to live in houses worth only one year's income).

This contrast is brought out in the following table, where housing demand for 1980 is projected on the basis of the population and income projections given above.

Capital values	1980 demand for housing units	1950 housing stock in 1980	Excess or deficiency (—) of demand in 1980
Under \$5,000 \$ 5,000-\$ 9,999 \$10,000-\$14,999 Over \$15,000	17,820 thousand units 21,150 12,550 13,680	24.920 thousand units 5,620 12,550	— 7,100 thousand units +15,530 +11,290 +13,680
Total	65,200	31,800	+33,400

Table 3

The contrast presented by the above computations is rather startling. It suggests that:

- 1. The demand for new housing will be 40% larger than would be required by the increase in households alone;
- 2. Unwanted, surplus empty housing units may constitute a major problem in the years ahead;
- 3. New home building will absorb a much larger volume of America's economic resources than would (continued)



be expected on the basis of starts, because the market will demand a rise in the quality and real cost of housing.

The above figures, which contrast the 1950 situation with the tentative 1980 situation, are not adequate to portray the full extent of this problem. They span the 30 years as a whole, 30 years in which the rate of increase in households will be greatest toward the end, 30 years also in each of which many housing units will be built, which in turn will have depreciated in value by 1980.

To squeeze the most light out of this exercise, data for the period have been broken down by decades and analyzed in the same manner described above. The following table uses these results to show by decades the rate at which the problem of empty, surplus housing units may be expected to appear.

It indicates the development of a huge supply of obsolete, surplus housing in the current decade 1950-1960, a position approaching balance in the decade 1960-1970, and another huge surplus, equivalent to 40% of the demand for this class of housing in the decades of 1970-1980.

#### HOUSING STOCK VALUED AT LESS THAN \$5,000 BY DECADE, 1950-1980

	1950 - 1960	1960-1970	1970-19	80
Standing at beginning of decade1.	18,680	17,150	20,280	Thousand units
Standing at end of decade <sup>2</sup> .	21,730	21,140	25,000	
Demanded at end of decade	17,150	20,280	17,820	
Surplus at end of decade	4,580	860	7,180	
Surplus as percent of stock demanded at end of decade	27	4	40	

 $<sup>^{1}\,</sup>After$  dropping surplus developed during preceding decade.

#### Table 4

The same methods used to derive these surplus estimates can be used to indicate the number and price ranges of the new housing units that will need to be built each decade between 1950 and 1980. The relevant table follows:

#### ADDITIONS TO HOUSING STOCK DEMANDED EACH DECADE, 1950-1980

	Value (at end of decade)	1950 - 1960	1960-1970	1970-1980	
Demanded at end of decade	\$5,000 and over	29,360	34,720	47,380	Thousand units
	\$5,000-\$9,999 \$10,000-\$14,999 \$15,000 and over	15,980 7,540 5,840	18,900 8,910 6,910	21,510 12,550 13,680	
In existence throughout decade	\$5,000 and over	13,520	23,050	27,260	
	\$5,000-\$9,999 \$10,000-\$14,999 \$15,000 and over	9,330 2,940 1,250	13,920 5,740 3,390	16,460 6,790 4,010	
Additions required during decade	\$5,000 and over	15,840	11,670	20,120	
	\$5,000-\$9,999 \$10,000-\$14,999 \$15,000 and over	6,650 4,600 4,590	4,980 3,170 3,520	4,690 5,760 9,670	

Table 5

### Here are the figures and the arithmetic that lead to the conclusions told above

In 1950 there were 37 million nonfarm households in the US... the Census shows that the value of housing they occupied tended to vary with household income as follows:

Household income	Millions of households	Median value of housing occupied
Less than \$5,000 \$5,000-\$9,999 \$10,000-\$14,999 \$15,000 and over	18.7 11.9 4.2 2.3	\$4,370 7,810 12,390 18,340
All incomes	37.1	4,970

#### Table 6

This tendency of value of housing to vary with the income of the occupants opens up an opportunity for an interesting exercise that may throw light on several problems.

For example, most of the adults who will head up house-

(A very important point to note here is that in 1950 the average family lived in a home whose value was only about one year's income, whereas FHA experience shows that the cost of houses bought is now averaging nearly two years' income. In other words, from FHA income statistics, the average family could have afforded twice as good a home.—ED.)

holds between now and 1980 are already born, so we have the basis for fairly adequate projections of the numbers of households that will be demanding housing each decade through 1980. One such projection, based on population projections made by the Census Bureau (Projection A), indi-

<sup>&</sup>lt;sup>2</sup> After allowance for casualty loss and depreciation in value but before allowance for withdrawal for lack of demand.

cates that the total number of consumer units may increase from 48.9 million in 1950 to 71.2 million in 1980, and the number of nonfarm households from 37.1 million to 65.2 million:

	Population (in millions)	Consumer units (in millions)	Nonfarm households (in millions)
1950 1960 1970 1980	151.7 177.8 204.6 240.0	48.9 54.4 62.0 71.2	37.1 46.5 55.0 65.2
Change, percent 1950-1980	58%	46%	76%

#### Table 7

We are also becoming increasingly familiar with projections of gross national product and personal income based on certain stated assumptions with respect to growth of the labor force, rate of unemployment, growth of productivity, and average hours worked. If we make such projections in 1953 dollars, also deriving the growth of the labor force from a Census projection, and assuming unemployment as 4% of the labor force, growth in productivity at  $2\frac{1}{2}\%$  per an-

num, and a decline in average hours worked of ½ % per annum, total and average income of consumer units will increase between 1950 and 1980 as follows:

INCOME OF CONSUMER UNITS (before taxes, at 1953 prices)

	Total	Average per consumer unit
1950 1960 1970 1980	239 (billions of \$) 335 472 640	\$4,888 \$6,204 \$7,613 \$8,989
Change, 1950-1980	+401	+\$4,101

#### Table 8

Now, if the 1950 relationship between household income and the capital value of the house occupied should continue to hold, this large rise in average income per consumer unit would indicate a substantial increase not only in the total demand for housing arising out of population growth, but also in the demand for better housing. To estimate how large this would be and the price brackets in which it would fall requires first an estimate of the distribution of the increased income as between different income groups. The estimates of this distribution assume that the present relative distribution is maintained in 'Table 9.

**Table 9** below indicates an enormous decrease by 1980, from 35.2 million to 20.4 million in the number of consumer units with incomes of less than \$5,000, and an even greater increase in the number of consumer units with incomes above \$5,000. This shift in income distribution should be accompanied by a shift in the quality of housing demanded.

#### MILLIONS OF CONSUMER UNITS BY INCOME GROUP 1950-1980

Income group	1950	1960	1970	1980	Change 1950-1980
All incomes	48.9	54.4	62.0	71.2	+22.3
Under \$5,000 \$5,000-\$9,999 \$10,000-\$14,999	35.2 11.3 1.5	26.6 21.6 3.8	22.8 26.8 8.4	20.4 29.6 13.8	—14.8 18.3 12.3
Over \$15,000	1.0	2.3	4.2	7.3	6.3

Table 9

This raises questions about the future demand for our present housing stock. How far will it go in meeting our future housing needs? How much new residential construction should we expect, not only to house our increasing population but also to meet rising standards of living? The reverse of this picture raises questions about the amount of demolition we may face, the magnitude of the emerging problem of slum clearance, and the necessity for improving and upgrading rather than merely maintaining our existing housing.

To get at this problem requires a series of projections even more tenuously constructed than those presented above. We know from the 1950 Census a few things about the housing stock as it existed at that time. There were 37,110,000 nonfarm housing units occupied at that time, and they were valued as follows:

	Number
All values	37.1 millions
Less than \$5,000 \$5,000-\$9,999 \$10,000-\$14,999 \$15,000 and over	18.7 11.9 4.2 2.3

Table 10

The noteworthy fact is that half of our housing stock in 1950 was valued at less than \$5,000, the general category

where these projections would indicate that demand is going to decrease sharply by 1980.

We cannot compare directly this stock with projected 1980 demands, however, since housing depreciates. Let us assume that over 30 years from 1950 to 1980 the 1950 stock depreciates at a rate of 2% per year. Unfortunately, we have little empirical evidence from which to draw a defensible depreciation rate, and the proper rate may be higher or lower than 2%. We do know it is probably wrong in one respect. In what follows, it has been applied to the 1950 value of both house and land. With a rapidly growing population, there will be many cases in which the land included in the estimate will not depreciate, but will be unchanged or appreciate. Because of the tenuous nature of the depreciation estimates, the magnitudes in the memorandum which are affected by the depreciation computation are subject to a considerable margin of error.

Taking the figures as they are, however, and allowing for some disappearance, due to fire, flood, and demolition not related directly to housing market developments, as well as for depreciation at the rate of 2% per annum, it becomes apparent that by 1980 the great bulk of the stock of housing in existence in 1950 would be valued at less than \$5,000. This is indicated in the following table:

Capital value	Housing stock 1950	1950 Housing stock in 1980	Change 1950-1980
Less than \$5,000 \$5,000-\$9,999 \$10,000-\$14,999 Over \$15,000 Disappeared	18,680 (thousand units) 11,930 4,160 2,340	24,920 (thousand units) 5,620 1,260 5,310 37,110	6,240 6,310 2,900 2,340 5,310

Table 11

/END

In their Components Clinic at Chicago this month, 6,000 members of the National Retail Lumber Dealers will see the answer to this question:

# WHAT'S NEW IN COMPONENTS FOR 1957?



**Panels.** Newest item is the Lu-Re-Co structural floor panel, which will be shown to the lumber dealers. They'll also see how partition panels can be adapted for roof construction. Also expected: a new window in several sizes to use with 4' o.c. wall framing and be combined to make one complete modular unit. For the new floor panel, see opposite page.



**Trusses.** Added to earlier glue-nailed (and just nailed) connections are metal joint connectors. The lumber dealers at Chicago will see the Sanford truss with its steel grip-plate, first reported in H&H's Dec. '54 issue. Still another new joint connector is shown on page 162. Big news is Small Homes Council's glue-nailed hip roof truss (see page 165).



**Mechanical equipment.** As air conditioning grows more popular, more builders will install cooling. And all trends in mechanical equipment point to smaller and more efficient units for both heating and cooling. Now a brand new component combines the basic heating-cooling parts in one package that also includes the water heater and a prefab flue (see page 163).



**Plumbing.** The prefab builder has been using preassembled plumbing walls since 1955. Now other builders are finding out about them, and where codes allow, they're the coming thing for tract and even custom houses. The lumber dealers will see the one on page 164.

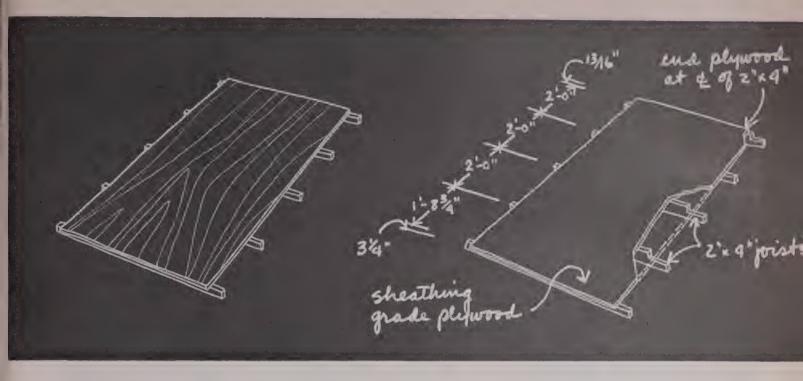


**Ductwork.** Now you can have shipped to the site a heating duct, with its fittings, that has been enginered to your requirements and is factory-cut and assembled (see page 164).



**Kitchens.** Several manufacturers are developing designs that combine appliances and cabinets in standard lengths and heights to fit modular plans. Some of the components which the lumber dealers will see in Chicago are used in the kitchen shown on page 152.



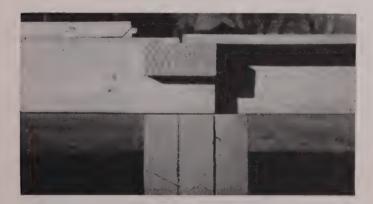


#### Now Lu-Re-Co offers you this new structural floor panel system

This new structural floor unit is the latest panel to be developed by Lu-Re-Co, and it will be featured at the NRLDA "Components Clinic" in Chicago. Not only will it be assembled for the dealers; it will be used to make the platforms for all the other demonstrations.

Like Lu-Re-Co's earlier exterior wall and interior partition

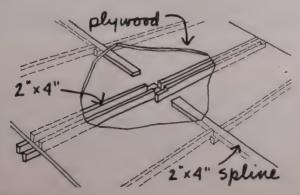
panels, this is basically a 4 x 8' plywood section on a 2 x 4" frame. It too lends itself to efficient panelization because it: (1) uses a minimum number of standard sizes and grades of yard lumber; (2) can be put together in the shop or at the site by relatively unskilled labor; (3) fits the 4' module and (4) is light enough (90 lbs.) to be handled by two men.

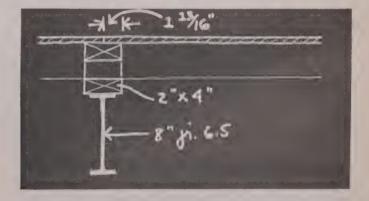


#### IT WORKS WITH BUILT-UP WOOD GIRDERS

In this particular panel (top of page) five 2 x 4" cross members support the plywood and serve as joists. In turn, they can be carried on built-up wood girders, spaced 4' o.c.

If the panel is to be covered with a resilient flooring (asphalt tile, cork, rubber or vinyl), 5/8" plywood should be used. For other flooring materials, 1/2" plywood is enough.





#### AND IT CAN BE USED OVER STEEL FRAMING

By using a 2 x 4" nailer to carry two interlocking panels, the new floor panel can be adapted for use with steel framing, as shown above.

The 2 x 4" cross members are designed so the panels interlock (top of page and below). Interlocking is assisted if alternate panels are reversed when laid in rows across a building.

#### WOOD SPLINES CONNECT THE PANELS (left)

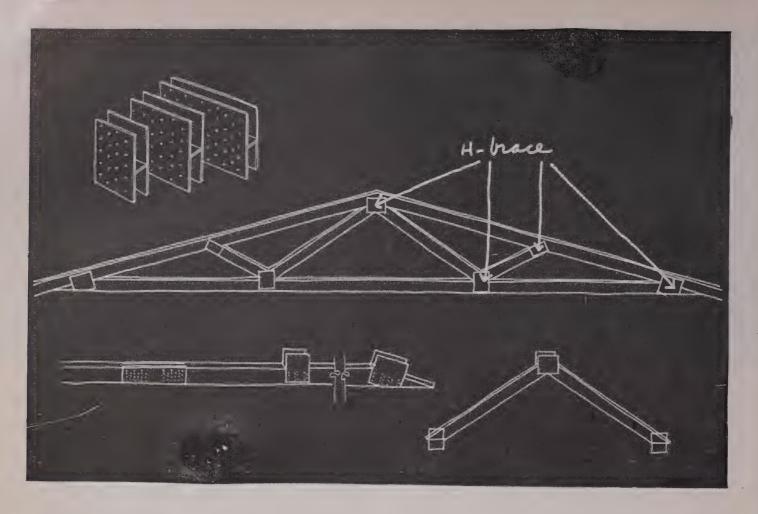
Projecting ends of the 2 x 4" cross members are notched. This allows 2 x 4" splines to run the full length of the panels, serve as supporting nailers for the plywood edges and connect adjoining panels.

Tests and studies were made by Frank M. Lescher, AIA, at the University of Illinois' Small Homes Council, under a grant from the Lumber Dealers' Research Council.

More component news ₩ >

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#### Here's another new way to fasten a one-plane truss together

The H-shaped connector shown above is a 20-gauge galvanized steel coupling which keeps all the members of a truss in one plane.

Some of the advantages that metal joint connectors bring to one-plane truss construction are: greater rigidity, reduction in movement at the joints and no gussets or lapped joints to increase the width of the trusses. The one-plane, metal-fastened truss can also be assembled and erected quicker than the two-plane truss, it is claimed.

This connector is sold only to prefabricators, millworks, and lumber dealers who manufacture for builders. Designs engineered by the company are FHA and VA approved.



BIG SAVING FROM TRUSSES IS IN PARTITION COST

One prime advantage to trusses is that you can use nonload-bearing partitions. These take less material to build and so take less time to put together, and they don't need a foundation.

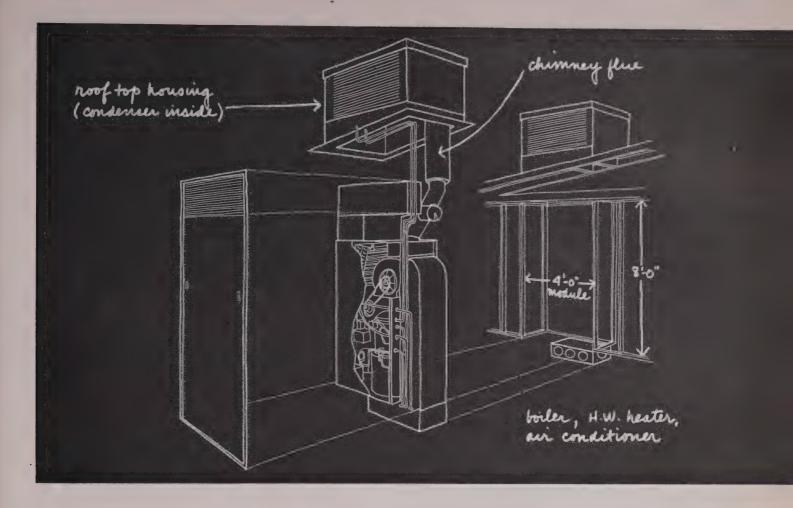
Further saving can be made by spacing the trusses farther apart: they need not be the usual 16" o.c. This cuts down on the number you need and on labor time.



ONE-PLANE TRUSS STACKS, SHIPS IN LESS SPACE

The one-plane truss is far more compact to ship than a truss with overlapping members. The top photo shows a truck carrying 15 two-plane trusses. Bottom photo shows one carrying 15 one-plane trusses. The compact height means that a truck can carry more trusses, still clear underpasses. One-plane trusses also save storage space in the shop and on the job.





#### This five-part heating-cooling plant comes complete in one package

The five basic parts of a heating-cooling system have been combined in this package unit by Dick Pollman, designer for Scholz Homes.

The five parts include:

- 1. heating boiler;
- 2. air conditioner;
- 3. three-gallon instantaneous hot water heater;
- 4. prefabricated chimney flue, and
- 5. condenser for the air conditioner.

All these parts fit into two small assemblies. The condenser, which goes on the roof, is 4'-0" x 2'-8", and the main cabinet, for first floor or basement, takes 3'-8" x 2'-0" of floor space.

#### The package unit saves on-site labor costs

According to Pollman, the whole package can be installed without taking off the front cover of the unit. The only necessary connections are for the fuel lines (gas or oil), the hot and cold water lines, electricity (a simple plug-in connection), and the condensate drain.

The domestic hot water coil runs through the boiler, which is kept at 190° to provide hot water even when the house is not being heated.

Pollman estimates that builders should be able to save about 25% of the combined cost of separate heating, cooling and hot water units because this package eliminates so much of the on-site time spent in assembling the separate items. The package is priced at about \$1,000.

Standard air conditioning and heating parts are being used. This should make for simplified service.

The prefab chimney fits between roof framing which is set at the usual 16" on centers. Total weight of the roof package unit does not exceed 150 lbs., so no special roof framing is needed for it.

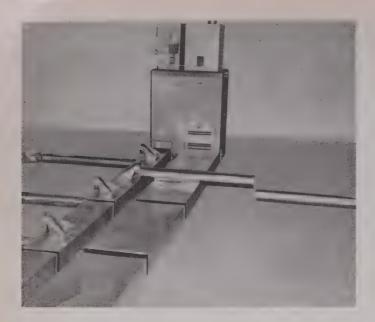


#### FIREPLACE PACKAGE WORKS WITH FIVE-PART UNIT

This fireplace is set alongside the package unit, in the same 2' deep wall shown above. The package's roof housing is large enough to include a second flue for the fireplace.

The new fireplace component costs about \$200 and can be set in place in an hour by the average carpenter. The fireplace can be faced by component-mantels, or 1" thick brick or stone.

More component news \*\*\* >





#### These ready-made ducts and fittings go quickly into place

These ducts, pipes and fittings for a heating system are not only factory-built; they can be engineered for each particular model in a development.

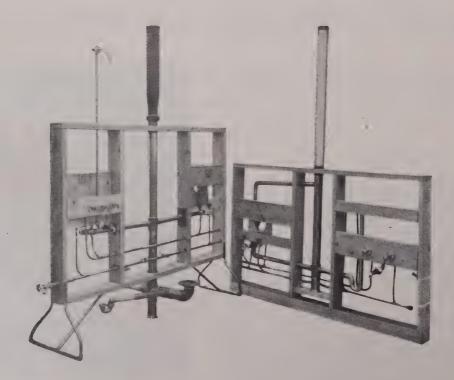
Also, they are prepacked for each house and clearly marked for each stage of the ductwork layout. As a result, there's a minimum of on-site sorting and confusion. This of course means that the heating contractor saves on each job and can pass part of the savings on to the builder.

The fittings also go in faster and easier because they can be cut for a precision-fit in the factory.

The factory design and packaging insures a uniform heating system for each house in a development.



PLUMBING



#### This preassembled plumbing wall works for one house or 1,000

The preassembled plumbing wall, already widely used by builders of prefabricated houses, is now available to all builders as a component. It will be on view at the lumber dealers' show in Chicago.

Project plumbers for tract and custom houses are finding that a pre-assembled wall unit like this saves them many

on-site hours and means a saving for the builder as well.

The present walls will serve the bath alone, or can be used as a wet wall between bath and kitchen. Bath layout need not be on just one wall; as shown above, plumbing units can also work off opposite or adjoining walls. The plumbing wall can

be used in on-slab, crawl-space or basement houses.



#### This big component is the new glue-nailed truss for hip-roofs

#### **ALL THESE TRUSSES ARE DESIGNED FOR A 3:12 SLOPE**

Basic members are peak trusses, hip-end trusses, outriggers, and hip members. Peak trusses form the usual pitched roof; flat top-chord trusses are used for the hip-end. Line of outriggers project from hip-end truss to carry out the roof line and form the overhang. The house (by Robertson Construction Co., Lincoln, Neb.) uses trusses designed for a span under 25'.

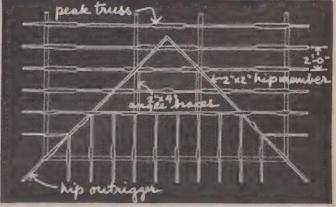
#### FOUR BASIC FRAMING MEMBERS ARE USED

Framing members shown in drawing are for a span 21'-0" to 24'-8". Other trusses are available for spans up to 28'-8" but these larger spans require more hip-end trusses and outriggers. Trusses and outriggers are spaced 2' o.c. to get a maximum number of standard dimensions. The only important variable dimension is in the length of the "flat top-chord" of the hip-end trusses. Hip-roofed trusses are the newest glue-nailed trusses developed (and copyrighted) by the Small Homes Council.

#### HERE'S HOW ROOF'S SIDE AND END SLOPES INTERSECT

The hip outrigger, center, continues the line of the hip member carried in the notched hip-end trusses. Hip-members meet between the hip-end and peak trusses. Design of hip-end trusses involved extensive testing to find a truss that could vary the length of its top chord without significant effect on its actual deflection./END







### ECONOMISTS' REPORT:

#### "Americans are three times as rich as in 1890,

Who says America has been building too many houses? Who says Americans are spending too much for houses? Who says housing is absorbing too much of our industrial wealth?

Now at last we can get at the facts to answer these challenges. The facts are marshalled in a 519-page book called "Capital Formation in Residential Real Estate" (Princeton University Press, \$10). The facts were developed with part of a \$460,000 grant from the Life Insurance Association of America. They were gathered by Dr. Leo Grebler, now on the staff of the Council of Eco-

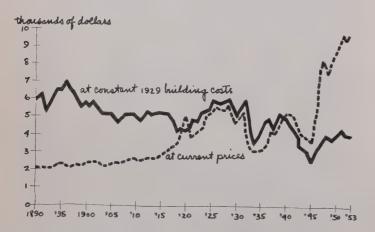
nomic Advisers; Dr. David M. Blank of Columbia Broadcasting System, and Dr. Louis Winnick of ACTION. Study was for National Bureau of Economic Research and Columbia University's Institute for Urban Land Use and Housing Studies.

What the facts add up to is briefly this:

The potential market for houses in the years ahead is bigger than ever.

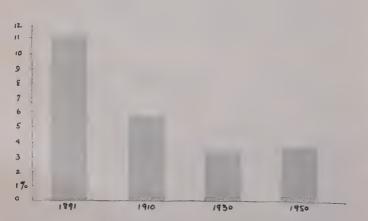
#### BUT

Right now the home building industry is being badly outsold and undersold by other industries competing for the consumer dollar.



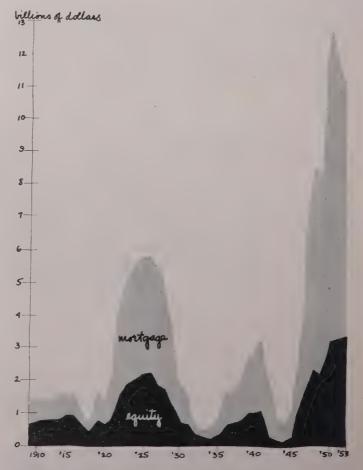
#### THE CHANGING COST OF HOME CONSTRUCTION

In current \$, houses cost much more, but costs have risen so fast that people are getting less house for more money (see Fact 2).



HOUSING'S SHARE OF THE CONSUMER DOLLAR

Capital formation in residential real estate amounted to 11.2% of all consumer expenditures in 1891 but by 1950 had fallen to 3.6%.



THE BUYER'S EQUITY IN THE NEW HOUSE

Mortgages have never, in any five-year period since 1911, provided over 75% of total capital invested in new houses (see Fact 8).

#### but they spend very little more for a home"

#### FACT NO. 1

Despite the enormous gain in spending power since 1890, per capita value of housing today is little more than it was then—and actually is less than it was between 1900 and 1940. Here are the figures (in constant 1929 dollars):

\$658 per person	in 1890
793	1900
792	1910
747	1920
870	1930
779	1940
703	1950
740	1955

In contrast, per capita consumer capital in other products increased from \$218 in 1900 to \$452 in 1948. Says the report: "Housing has not responded to rising income. Housing has declined not only in relative terms, but in absolute per capita measures. Newer goods and services have competed more successfully for a place in family budgets."

#### FACT NO. 2

Actually the average new home buyer in 1955 bought 31% less house than the average new home buyer in 1896. Here is the average price of new houses at constant 1929 building costs for representative years since 1890:

1890	\$6,143	1945	\$2,457
	1 1/2 . 1		4 2
1896	6,712	1951	4,162
1921	3,998	1952	3,877
1929	5,972	1953	4,064
1934	3,635	1954	4,174
1939	5,057	1955	4,622

#### FACT NO. 3

One big reason consumers with three times as much money decided not to spend the increase for better homes is that home building costs have gone up so much faster than the price of other products competing for the consumer's dollar. Here are the cost changes from 1890 to 1950:

#### FACT NO. 4

One reason home building costs climbed faster than other prices is that building material prices rose faster than other commodities from 1890 to 1950:

COMMISSION AND AND ADDRESS OF COMMISSION OF		
Building material prices	up :	343%
Wholesale prices of all co	ommoditiesup	187%

#### FACT NO. 5

But the biggest reason is that home building still requires so much on-site labor, and from 1890 to 1950 construction wages rose 851.2%, faster than the 768.5% rise in factory wages.

#### FACT NO. 6

Land costs are a smaller factor in housing costs than in 1890. In 1953 land represented only 16.9% of the cost; in 1890 it was 40%. Reason for the decline: in 1890 people had to live within walking distance. The automobile has opened up new acreage for houses ten times as fast as the population has grown.

#### FACT NO. 7

In 1891 housing was 8.2% of the national product; in 1929 it was only 3.7%, and in 1950 it was only 2.7%.

#### FACT NO. 8

Home buyers put up a far bigger equity than has been supposed. "Even during the recent postwar years of high-percentage debt financing under government aid programs and during the height of the boom of the Twenties, equity funds were close to 30% of total expenditures (see chart)."

#### FACT NO. 9

"The number of additional [nonfarm] households between 1900 and 1975 is likely to exceed any increment on record," but economists still can't agree on a figure. Low estimate of the increase is 18,700,000; high is 34,600,000. This last figure almost equals 1950's total of 37,100,000 nonfarm homes.

#### FACT NO. 10

Migration will increase the demand for new houses. "Internal migration may create large, persistent pockets of vacancies" in some areas, "leading ultimately to abandonment or demolition of nonfarm dwellings."

#### FACT NO. 11

As real income advances, the "traditional notion" of only one dwelling per household will have to be revised. Evidence shows a trend already toward many more seasonal houses.

#### FACT NO. 12

Some 300,000 dwelling units a year may be withdrawn from the housing stock yearly in the foreseeable future. "Demolitions for the first time in many years if not in the history of residential real estate in this country, seem to reach proportions calling for a large volume of new construction over and above the long-term rate of net household formation."

#### FACT NO. 13

The authors believe it possible that consumer preference for houses may increase. And "larger numbers of households might trade old for new units if the latter were vastly superior in design, style, location and quality."

#### FACT NO. 14

Although some costs have increased, others have come down. Here are some of these contributing factors:

- Improved design has made smaller houses as desirable as yesterday's much larger houses.
- Lighter materials and construction have pared building costs.
- Houses also tend to be smaller because more of them are being bought by lower-income families.
- More houses are built in the suburbs, where costs are lower than in the city.
- More houses are built today in the West and South, where the climate is easier./END

# HOW TO CHOOSE AND USE THE RIGHT OUTSIDE PAINT

US Forest Products Laboratory

sums up 30 years of research into the painting of wood siding

Builders know what they want in an outside paint for new wood.

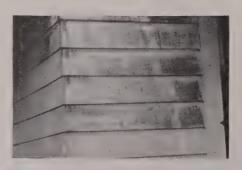
They want it (1) to go on fast and easy; (2) to be bright in color and glossy in sheen; (3) to be durable and (4) to resist blistering under tough moisture conditions. They would also prefer that it (5) not mildew or (6) discolor under metal corrosion or chemical fumes.

#### Good paints have most virtues

No one paint has all these desirable traits in optimum degree, but all the major types have most of them. That's the conclusion reached by the US Forest Products Laboratory in their newest report: "Wood Siding—How To Install It, Paint It, Care For It." The report outlines the properties of various types of outside paint, classifying them according to pigment.

Some of the good points, like a bright sheen or fast dirt shedding, are plus values, not directly affecting the life or service of the paint film. Others are more basic, and a shortcoming can result in early paint failure.

Premature paint failures on new siding are most often due to two prime causes: chemical discoloration and



LEAD TURNS BLACK DUE TO FUME

moisture-based blistering and peeling. Paints containing lead (see chart) will turn black if exposed to hydrogen sulfide fumes in the air. This chemical may occur near industrial plants, oil refineries, railroads, can even be

caused by decaying vegetation in polluted streams. So-called "fumeproof" paints are made without lead pigment, and thus resist sulfide attack.

#### Water is an enemy

Blistering and peeling are much more common on new houses because of the build-up of moisture in the wall behind the siding. Sometimes this takes the form of water vapor from moist air within, other times it is free water that has forced its way in through openings in the wall. Most of this water can be stopped by good construction methods (page 171), but if the builder expects a heavy moisture build-up after occupancy, he should choose his paint type with this in mind.

FPL advises every builder to study the conditions that affect paint in his area and in his particular house. He must decide what things his buyers want most in a paint, then choose the type that comes closest.

	PAINT CHARACTERISTICS								
V	DURABILITY	NORMAL RATE OF CHALKING GOOD REPAINTING SURFACE	CLEAN. HIGHLY REFLECTIVE COLOR	DIRT SHEDDING	RESISTANCE TO METAL CORROSION	RESISTANCE TO HYDROGEN SULFIDE FUMES	RESISTANCE TO   MILDEW:	MOISTURE SENSITIVIT	
WHITE LEAD IN OIL	deag	policy print	efficient	Sopr	aport	Span	Sulverande	apob	
TITÁNIUM-LEAD-ZINC	orob	Sky it it	succedent.	, western	Sagn	Mediani	inmanne	amailin	
TITANIUM ZINC	obag	Service Control of the Control of th	angularis	medlent	Gag.	Medleni	المعاملية المعاملين	benda's	
TITANIUM-LEAD	oport	week Hairi	enteateris	overes.	apad	6000	mdusesher	appl	
TITANIUM IN ALKYD RESIN	operat	den appirit	Associate.	westeris	OROX	sucedent	miluera the	aprob	
DARK COLOR PIGMENT (TRIM)	vest	Arres of the	ouealdeut.	مالسالسا	aprob	wedden't	a due to la	appro	

Data from US Forest Products Laboratory report

DAINT TVDE /RV DICMENT\\*

#### This chart rates paints according to eight most-wanted characteristics

Listed above are the different outside paints, with FPL's evaluation of their desirable qualities.

To use this chart, pick the paint hall-marks most important for your houses, then check the paints to see how each measures up. For example, if industrial fumes are serious, you should avoid lead pigment paint; if mildew is likely, you will want zinc in your formulation; if your buyers like a low gloss paint, low luster alkyd resin paints are indicated.

#### Under it all: the primer

No paint job is any better than its prime coat. If this layer fails, all fails. Builders start from scratch, and the first coat can determine how paint will serve during the lifetime of the building. The prime coat has to provide a base for all future repainting; it must have strong adhesion to the wood.

Regular outside finish paints should not be used as primers, FPL says, since

they usually contain zinc oxide, a moisture sensitive pigment. Most manufacturers make up zinc-free primers for use under their mixed pigment paints. FPL suggests that you always use the same type of primer and finish paint to



VAPOR IN WALLS CAN PEEL PAINT

avoid any chance of incompatibility. Flat-grained wood with wide summerwood bands should be primed with aluminum pigmented primer, the report says. Ordinary primer will flake off rapidly from summerwood or knotty areas.

Some paints are used as both primer and finish coat (white lead, titaniumlead, and titanium-in-alkyd): They have no moisture sensitive pigment, and are sold as "blister resistant."

#### Controversial zinc oxide

Though paint men seem in agreement on zinc-free primers, FPL's finding that "where moisture troubles are widespread, a zinc-free paint is to be preferred" arouses both belief and disbelief among paint men. Some agree that moisture-inert pigments are safer, but others feel that since failures occur between wood and primer, it is enough if the primer is zinc-free.

But the formulation that discards zinc oxides gives up many virtues, too. Zinc gives white paint a high, bright gloss, it is mildew resistant, and has a tough, slow-wearing surface.

For differing views on this disputed point, turn the page.

DECEMBER 1956

#### Experts disagree on the role zinc oxide plays in moisture-caused failures

"Zinc-containing paints have been found to swell much more than wood when wet and must therefore be classified as moisture-sensitive. They blister more readily on contact with water than do the other types of paint. Under some conditions, contact with water may not cause zinc-containing paints to blister but may simply induce premature cracking, curling and flaking . . . . If there is doubt (about moisture), one of the zinc-free paints is the wiser choice."

Forest Products Laboratory Bulletin No. 52

"Prime coat is critical." William Januelson, paint chemist, Arco Co. says:

"I feel that the prime coat is the critical one, since failures occur at the wood-paint interface. Finish coats need not be zinc-free."

"Shortsighted." J. L. Kimberly, executive vice president, American Zinc Institute says:

"We suggest that the evidence on hand does not warrant the [FPL] opinion concerning second coats.

"Extensive tests by our membership have established that a standard two-coat paint system—zinc-free primer and standard exterior finish with zinc oxide—is quite blister resistant. Blister box tests, as well as field tests, support this position. It seems clearly established that the coat of paint applied directly to the wood governs the resistance to blistering of the entire paint film,

"It seems shortsighted to sacrifice the desirable properties of zinc oxide: mildew resistance, good whiteness or color retention and years of resistance to the deteriorating effects of weather." "Not desirable." Lloyd Owen, technical director, paint sales, American-Marietta Co. says:

"We believe that zinc is not desirable in a primer, and where moisture is a problem, it is preferable that zinc oxide be kept out of the finish coat."

"One of the ways." Robert Jamieson, technical director, Benj. Moore Co.

"Omission of zinc oxide is only one of the ways of getting blister resistance."

"Zinc not sole test." Sherman F. Carlson, Cleveland Technical Service, Sherwin-Williams Co.

"Good exterior paint formulation is not based entirely on choice of pigment. Presence or omission of zinc-oxide does not indicate that blistering or peeling will occur."

#### Three-coat paint job is your best bet for the best paint film and service

In its new report, FPL discards the agency's long-time endorsement of two-coat paint systems for new wood, and comes out strongly for a three-coat first-time paint job.

Reason: it is difficult, if not impossible, to get the proper thickness (4½-5 mils., about the thickness of a dollar bill) with one coat of primer and one coat of finish paint, using today's formulations. Because of the growth of

the nonprofessional market for paint, most mixtures are made for maximum ease of application, rather than for heavy film build-up, FPL's experts say.

At a recent cost-cutting conference in Washington, D.C., sponsored by the National Housing Center, and under the direction of NAHB's Research Institute (see also page 172) builders complained that they could not get the 5 mil. thickness in a two-coat opera-

tion. Said Wallace (Bud) Arters:

"I think we're a big enough industry to get the paint we want, rather than a thinned down version created for the do-it-yourself" market.

#### Put down that thinner

The paint industry insists that any such complaint is unjustified. Paint makers point out they can make paint with any desired viscosity, but they cannot be sure that the builder will get all the hiding power they build into the paint.

Already on the market are "one-coat outside paints" with a high percentage of opaque pigments, made to give the same hiding power in one coat as expected from two of old-type paints. But if the painter thins the paint to get the workability he likes, he sacrifices this opacity by making the same amount of pigment do extra work.

As one paint chemist said: "If a builder wants the full hiding power we put into paint, let him take away his painter's bucket of thinner. Use the paint as we make it, instead of changing the formulation by adding thinner. It's just not the same paint anymore."

For today's average outside paints, the  $4\frac{1}{2}$ -5 mil. thickness can be built up by applying one coat of primer at a rate of 600 sq. ft. per gal, and two coats of finish paint at 700 sq. ft. per gal each.



BEST RESULTS COME FROM LETTING EACH COAT DRY A DAY OR TWO



#### Four ways to keep water out and stop moisture-caused paint failures:

#### 1. BLOCK IT OUT

A tight vapor barrier in outside walls can halt the movement of built-up moisture vapor into the vulnerable wall cavities. Washers, dryers, cooking, showers, even body heat builds up vapor pressure that drives right through walls and condenses on the back of the colder siding. Asphalt



coated paper, aluminum foil, and polyethylene film will all do the job, as will two coats of the new latex-base interior paints on inside walls. Ventilation in kitchen and bath will help carry moisture safely outside the house.

#### 2. DRAIN IT OUT

Where gutters are installed, they must be hung low enough from the eaves to permit melting roof snow to slide off. If they are too high, "ice dams" build up in the snow-clogged



gutters and the overflow seeps into the walls through the eaves. Gutters must also be pitched steeply enough to carry water off rapidly and have enough downspouts to handle the flow of any downpour. Flashing in roof valleys, along dormers and chimneys and over windows and doors also serve to guarantee dry walls.



#### 3. BRUSH IT OUT

Water can be stopped dead in its cracks with new water-repellent pre-

servatives. Compounded of waxes, resins and oils, the liquid is brushed into all joints before painting, and causes water to slide off, instead of working between siding courses and soaking the backs of the boards. Some experts recommend dipping instead of brushing to get the fullest effectiveness.



#### 4. LOCK IT OUT

Lap and butt joints in siding should be square and tight to stop penetration of rain and snow. Bevel siding should overlap 1"-11/4", and courses over windows and doors must be continuous. Careful fitting of corners will prevent hollows where water can collect. Where dormers meet roof, siding is cut 1" short, so water cannot soak into the end grain. All but the heaviest driven storm water can be kept from the siding by generous overhangs that prevent capillary inroads by keeping rain from falling on the walls./END

## Housing Center experts recommend their RECT WAYO TO DE-BEST WAYS TO BUILD BETTER FOR LESS

Sixty top architects, builders and engineers who met in Washington last month to exchange ideas for cost cutting techniques\* found more than half their potential savings outlawed by local codes, union resistance and FHA-VA regulations.

The meeting was the first of a series • sponsored by the National Housing Center and directed by the Research Institute of the National Association of Home Builders. Series goal: A better low-cost house.

Here are cost-saving devices that were suggested but which run into regulatory obstacles in most locales:

· Use of a grade beam instead of a continuous footing for foundation walls. This eliminates earth digging and concrete by substituting regularly spaced concrete piers for the continuous frost-depth footing around the perimeter of a house. Savings: an estimated \$100 per house.

- · Pouring basement floor and footings in one operation for foundation walls in basement-type houses. This method cuts to two stages the traditional three-stage approach to getting a basement under a house. Time saved cuts building costs, and the level floor area on which workmen can perform adds additional cost-saving dividends. Total: as much as \$100 per house.
- Use of spray equipment to put the last layer of joint cement on gypsum wallboard. When casein paint is used as a vehicle for the cement or when dime store color is added, a one-coat finish can be applied over an entire wall surface for low-cost houses.
- Use of asphalt for sidewalks where walks are required.

· Use of preglazed windows. (One builder got around union objections by using jalousie windows—no framing around glass. Since a jalousie would not be a window without the glass, he reasoned, "unions could not object".)

Commenting on these new but often impracticable ideas, keynoter Andy Place, Indiana builder, suggested: "Like the farmer we've got to ask ourselves if we're farming as well as we really know how."

Significantly seven basic, usable techniques also suggested at the conference are, as Pennsylvania builder Bud Arters put it: "practicable but notfrequently-enough-practiced."

All seven are shown below and on the opposite page. All seven are suitable for big and small builders alike. (And all seven have previously appeared in House & Home.) Urged General Chairman Alan Brockbank: "Put as many of these techniques into use as possible."



Peter Braun: trusses give roof and ceiling framing







#### Use a roof truss

At least 25% less labor is needed if you use roof trusses instead of conventional rafters and joists. On a completed roof, trusses can save a neat 28% in materials.

Ordinary nailed trusses are economical for spans from 20' to 32'. They can be shop or site assembled, are easily stored. ("10 ways to cut costs"; H&H Jan. '53)

#### Tilt-up exterior walls

You save 20-30% in labor over conventional assembly because men can work more efficiently on the flat subfloor.

Wall is nearly finished before it is tilted up (except for doors). Sheathing is used in large pieces, and siding applied in shop. Employees work in greater

("10 ways to cut costs"; H&H Jan. '53)

<sup>\*</sup>Some members of the conference felt that better business methods were more important cost cutters than new building techniques. See News

#### **Precut all framing material**

Cutting and fitting each structural member as the house progresses is slow and expensive. Wood members can be precut from working drawings in a mill or your own shop. The advantages:

- 1. A slight reduction in on-site sawing.
- 2. A sizable reduction in idle time.
- 3. Tighter fitting wood members. ("10 ways to cut costs"; H&H Jan. '53)

4

#### Try the "one-room" technique

With truss construction the interior of the house becomes a big open workshop. This makes two big savings possible:

1. Wallboard can be applied to the walls and ceiling with a minimum of cutting and waste, saving up to 50%.

2. Entire house can be floored in one piece, a 2¢ per sq. ft. saving. ("10 ways to cut costs"; H&H Jan. '53)

5

#### Use parts instead of pieces

You can save 30% in wall-framing labor by using panels, reports the Illinois Small Homes Council. Biggest savings come from setting doors and windows in a shop. Waste is cut and walls go up faster for further savings.

Panels are available at many local lumber yards. (See also page 161) (16 ways to build for less; H&H Mar.'55)

6

#### Eliminate framing over doors

Why not eliminate the rough double header and cripples over interior doors? You can do it two ways: 1) by running the doors full height (8' doors can be shop-made economically from 8' plywood); 2) by running jambs to the ceiling, filling transom space with a piece of flush door.

(16 ways to build for less; H&H Mar.'55)

7

#### Prefabricate the plumbing

You can save \$35 by using prefabricated waste-drain trees. Not only is assembly faster, but the drain is usually better fitted under shop conditions.

There are two types of prefabricated "trees." One is available precast from the manufacturer; the other is preassembled from standard parts.

(Five ways to cut costs; H&H Feb. '53)

F. R. Dapprich



Photos: W. Bennett

Dick Dickman: waste from shop-cut frames makes stakes and cripples.



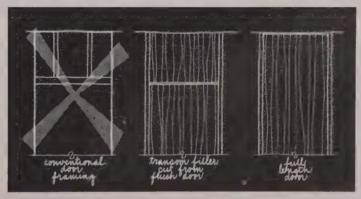


Robert Schmidt: "one-room" lets me integrate trades.





Harry Quinn: house goes up in one day with big pieces.





Bud Arters: I can save \$1 on every door: looks better too.





L. Glenn Shields: We encourage prefab plumbing in Detroit.

Photos: (center) Philips; (right) W. Bennett

## DIRECTORY

#### Prefabricated, packaged house firms who sell through builders or dealers

#### Alabama

LUMBER FABRICATORS, INC.

Fort Payne, Ala.

Brand: LFI Homes
President: T. E. Stokes
Sales manager: Myron Raymond

Plant: Fort Payne

Package: room size exterior panels sheathed and sided; windows in place; doors framed; partition panels; trusses; precut floor, roof framing and sheathing; gables; garage or carport.

Optional: air conditioning.

#### **Arkansas**

#### SOUTHERN CLIFF MAY HOMES, INC.

Stamps, Ark.

President: D. R. Teis Sales manager: E. S. Johnson

Plant: Stamps

Package: wall panels completely sheathed and sided; interior partitions framed; exterior door and window panels; precut post and beam rafters, garages and carports; insulation; roofing; trim supplied; storage walls.

Optional: heating, air conditioning,

range.

#### California

#### CALIFORNIA MODULAR HOMES

INC.
Del Paso Heights, Sacramento
County, Calif.

President: E. L. Schutt Sales manager: Jerry W. Schutt Plant: Del Paso Heights

Package: exterior wall panels precut and preassembled, with board and batten finish applied and primed; precut rafters; interior and exterior trim; all doors prehung; hardware; aluminum and stainlish steel windows in frames with sliding sash and screens; bathroom accessories but no plumbing fixtures; roof trusses, storage walls; wall and partition panels.

Optional: carport, garage, metal or wood kitchen cabinets, roof decking, insulation, interior plywood finish, birch interior doors.

#### MOBILE HOME CORP.

Bakersfield, Calif.

Brand: Mobile Homes
President: Hugh Curran
Sales manager: L. D. Ford

Plant: Bakersfield

Package: completely assembled house shipped; includes air conditioning, forced air heating, ceramic tile baths, composition or shingle roof, attached or detached garages, aluminum sash, hardwood floors.

#### WESTWAY HOMES INC.

Los Altos, Calif.

President: Fred H. Tanner Sales manager: John Martin

Plant: Los Altos

Package: exterior wall panels completely sheathed and sided; aluminum windows in place and glazed; all doors prehung; interior partitions assembled with openings; all other items precut; no wall insulation or gypsum furnished but roof sheathing and insulation is furnished.

Optional: electric appliances, dishwashers, garbage disposer.

#### Connecticut

#### FABRICATORS INC.

South Norwalk, Conn.

President: P. William Nathan Sales manager: Paul D. Levine Plant: South Norwalk

Package: smaller-than-room-size exterior panels sheathed and sided; separate window and door units; window walls; roof and floor panels; bare partition panels; trusses and gables, unassembled storage walls; cabinets; vanity-lavatories; carport.

Optional: heating plant.

#### WOODCREST LUMBER & MILL-WORK CO., INC.

Woodbury, Conn.

Brand: Arbor Homes
President: Paul P. Posin

Plant: Woodbury

Package: exterior wall panels of room size completely sheathed and sided; partitions assembled; all doors prehung with hardware; rafters cut and notched; trusses; storage walls; roof panels; garage or carport; joists; floor panels; flooring; insulation; wallboard; precut doors and package trim; complete carpentry package.

Optional: plumbing and fixtures, heating, air conditioning, wiring, built-in range, refrigerator.

#### **Florida**

#### FLORIDA BUILDERS, INC.

St. Petersburg, Fla.

President: John T. Haynsworth Vice president sales: Martin V. Ahl Plant: St. Petersburg Package: room-size or larger ex-

Package: room-size or larger exterior panels sheathed and sided; windows in place and glazed, unless casement or jalousie type; prehung doors with hardware; partition frames; trusses; storage walls; cabinets; ceiling and roof panels for some models; vanity-lavatories, garage or carport.

#### Georgia

#### KNOX CORP.

Thomson, Ga.

President: P. S. Knox, Jr. Sales director: R. H. Denton

Plant: Thomson

Package: room-size exterior panels sheathed and sided; windows in place and glazed; insulation in; interior gypsum applied; prehung doors with hardware; partition panels; trusses; precut floor system, joists and rafters and roof decking; carport; partition panels; rake panels; gable panels; laminated beams and columns.

#### YETTER HOMES, INC.

Savannah, Ga.

President: George K. Yetter

Plant: Savannah

Package: room-size exterior panels with sheathing; windows and doors in place; partition panels; storage walls; roof and floor panels; trusses; precut roof sheathing; carport. Optional: air conditioning for some models.

#### Illinois

#### W. G. BEST HOMES CO., INC.

Effingham, Ill.

President: W. G. Best Sales manager: George Frederking

Plant: Effingham

Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; insulation in; interior gypsum applied; all doors prehung with hardware; roof trusses and panels; joists and rafters; wall and partition panels; storage walls; garages and carports; permanent finance division.

Optional: vanity-lavatories, air-conditioning, electrical wiring conduit and bases, range, refrigerator.

#### CRAFT WAY, INC.

Aurora, Ill.

President: Jack Von Ehr Sales manager: A. C. Hyde Plant: Aurora, Ill. Package: exterior wall panels sheathed and sided; windows in place and glazed; insulation in; doors prehung with hardware; precut joists and rafters; garage and carport; roof trusses; storage walls; plumbing walls supplied. Optional: all kitchen appliances, vanity-lavatories.

#### DOUGLAS HOMES CO.

Springfield, Ill.

President: A. H. Lubin
Sales manager: Paul B. Walker
Plant: Springfield

Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; insulation in; all doors prehung with hardware; roof trusses; precut plywood roof sheathing; precut soffit material; insulation; roof shingles; kitchen cabinets; garages and carports; partition panels; complete hardware.

Optional: heating ducts and plants, air conditioning, range and refrigerator, vanity-lavatories.

#### ECONOMY BUILDINGS INC.

Chicago, Ill.

President: Richard P. Matthiessen Plant: Chicago

Package: exterior wall panels completely sheathed; windows in place and glazed; doors prehung with hardware; all additional lumber to complete house precut; roof shingles; rough and finish hardware. Optional: oak flooring, shutters.

#### GBH-WAY HOMES, INC.

Walnut, Ill.

President: Clifford M. Hill Plant: Walnut

#### THURO BILT HOMES

Fairbury, Ill.

President: Edmund B. Kloter Sales manager: Chris A. Huette, Jr. Plants: Fairbury, Belleville, Ohio Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; insulation in; interior partitions assembled; all doors perhung with hardware, not installed floor package; precut joists and rafters; roof trusses; storage walls: garages and carports.

Optional: vanity-lavatories, heating plants and ducts, built-in range.

#### Indiana

#### ACME BUILDING MATERIALS,

Indianapolis, Ind.

Brand: Precision Homes

President: John E. Bauer
Sales manager: Louie Moller
Plant: Indianapolis
Package: room-size and smaller
panels framed and sheathed—some
exterior finish applied; windows in
place and glazed; doors prefit; assembled trusses; partition panels;

kitchen cabinets; carport.

Optional: heating plant, appliances.

#### ALLEN INDUSTRIES, INC.

Fort Wayne, Ind.

Brand: Allen Homes

President: Robert J. Allen
Sales manager: Ralph W. Eaton
Plant: Fort Wayne
Package: 1' to 8' modular panels
with sheathing; room-size parti-

tions; gables; trusses; windows glazed; prehung doors; cabinets; furnace and packaged flue; garage or carport.

Optional: bath fixtures, acoustical tile, plumbing.

#### GENERAL HOMES, DIV. OF GENERAL INDUSTRIES, INC. Fort Wayne, Ind.

President: William B. F. Hall Vice president (sales): Willard M.

Jones

Plant: Fort Wayne Package: larger-than-room-size exterior panels with sheathing and building paper; windows, storm sash, screens in place; trusses; ceiling and roof panels; insulation

in place; predecorated interior; cabinets, plumbing assembly; wiring in place; all trim installed and painted; bath fixtures; furnace and chimney; water heater; floor tile; light fixtures; furnish interim financing.

#### MAY HOMES AND SUPPLIES

Evansville, Ind.

President: Paul J. May Plant: Evansville

Package: exterior wall panels of room size and as large as 36' completely sheathed and sided; windows in place and glazed; insulation in; interior gypsum applied; all doors prehung with hardware; trusses; storage walls; garage or carport; partition panels.

Optional: plumbing, heating, air conditioning, wiring.

#### NATIONAL HOMES CORP.

Lafayette, Ind.

President: James R. Price Vice president (sales): George A. Cowee, Jr.

Plants: Lafayette, Horseheads, N. Y., Tyler, Tex..

Package: complete panels for exterior and interior walls, partitions and roof; insulation in place; all windows and doors factory-in-stalled; precut interior and exterior trim; heating; water heater; cabinets; plumbing package; electric fixtures and wiring; all assembly parts precut; Acceptance Corp.

Optional: wood floor package, garage or carport, air conditioning, kitchen appliances, washer, dryer, storm sash or double-glass, outside storage units, porches, fences, attic

#### NEW CENTURY HOMES, INC. Lafayette, Ind.

Officers: John T. King, E. S. Lowman, R. H. Kelso

Plant: Lafayette Package: room-size exterior panels

with framing and plywood; windows and doors installed and trimmed; insulation and vapor barrier in exterior walls; ceiling panels; roof panels, gable panels, prime painted and trimmed; floor beams; fish wire for panels, cutouts for electrical receptacles; garage or carport; trusses in 3/12 or 5/12 pitch; stressed-skin and conventional wall construction.

Optional: hip roof panels installed of gable panels.

#### PLACE HOMES, INC.

South Bend, Ind.

President: Robert B. Place Sales manager: William Yeoman Plant: South Bend

Package: all framing and blocking

precut: trusses: gables: interior doors prehung with hardware; furnace and ducts; vanity-lavatories; room divider screens; garage or carport. Planning interior panels for some models in near future. Ontional: sir conditioning

#### RICHMOND HOMES, INC.

Richmond, Ind.

President: Charles F. Travers Vice president (sales): H. Quentin Ramsey

Plant: Richmond

Package: room-size interior panels, two exterior panels to a side, sheathed and sided; windows in place and glazed; prehung doors with hardware; trusses; kitchen cabinets; storage walls; precut joists and rafters; garage or carport; own subsidiary Housing Cred-

Optional: air conditioning.

#### US STEEL HOMES, INC.

New Albany, Ind.

President: H. D. Moulton Vice president (sales): D. F. Rucks,

Plants: New Albany, Harrisburg,

Package: exterior wall panels are sheathed, insulated; interior finished; windows glazed and trimmed out on interior; all doors hung and trimmed complete; hardware installed: roof trusses and panels: partition panels; carports and garages; gables; roof shingles; chimney; furnace; kitchen cabinets; bath accessories; lighting fixtures; precut soffits and closet material; Credit Corp.

Optional: heating plants and ducts, built-in and free-standing ranges, refrigerators, washer, dryer, garbage disposer, storm windows,

#### Iowa

#### KOZY MANUFACTURING CO.

Exira, Iowa

President: T. J. Godwin Vice president (sales): T. H. God-

Plant: Exira

Package: panels up to 20' long sheathed and partially sided; windows in place and glazed; partition panels; prehung doors with hardware; trusses; gables; precut rafters, garage or carport.

Optional: electrical wiring, kitchen cabinets, custom designing available.

#### Kansas

#### STANDARD HOMES

Kansas City, Kan.

President: Robert L. Sweet Plant: Kansas City Package: exterior wall panels of room size completely sheathed and sided; windows in pace and glazed; insulation in; all doors prehung with hardware; roof trusses; garages or carports; all materials necessary to complete house except plumbing, heating, and wiring.

#### WADSWORTH HOMES, INC.

Kansas City, Kan.

President: J. H. Stanton Sales manager: D. C. Moreland Package: exterior wall panels completely sheathed; windows in place and glazed; insulation in; all doors prehung with hardware; trusses: garage or carport; partition panels.

#### Kentucky

#### FAIRLANE HOMES, INC.

Louisville, Ky.

President: Edgar W. Archer Sales manager: Jay D. Baker

Plant: Louisville

Package: exterior wall panels of room size completely sheathed; aluminum windows in place and glazed; interior trim precut; all doors prehung; roof trusses; partition panels; garages and carports. Optional: built-in range.

#### Louisiana

#### CRAWFORD CORP.

Baton Rouge, La.

President:' W. H. Crawford Asst. sales manager: M. R. Groves Plants: Baton Rouge & Gloster,

Package: wall-size panels sheathed and sided; windows in place and glazed; exterior doors prehung, sheathed roof panels; precut joists, rafter; partition panels; heating plant and ducts; vanity-lavatories kitchen cabinets; carport; furnish interim and permanent financing, Optional: air conditioning.

#### SOUTHERN CONSTRUCTION

Lake Charles, La.

Southern Homes President: C. R. Grein Sales manager: Lou Hart

Plant: Lake Charles

Package: room size exterior wall panels; partition panels; roof trusses and panels; storage walls; carports.

Optional: vanity-lavatories, heating plants and ducts, built-in range, dishwasher, disposal unit.

#### UNITED MORTGAGE CORP.

New Orleans, La.

Popular Homes President: Malcolm A. Coco Sales manager: Frank J. Frey

Plant: New Orleans

Package: room size exterior panels sheathed and sided: windows in place and glazed; prehung doors; assembled trusses; framed interior partitions; storage walls; overhangs assembled in sections; vanity-layatories: carport.

#### Maine

#### MORGAN C. ELMER, INC.

Rockland, Me.

President: Morgan C. Elmer Plant: Rockland Package: exterior wall panels 4' to-8' completely sheathed and partially sided; windows in place and glazed; insulation in; all prehung with hardware; roof panels completely insulated with interior surface applied sheathed roof deck; roof trusses; joists and rafters; partition panels; storage walls; garages and carports.

#### Maryland

#### DIXIE HOMES

Upper Marlboro, Md.

President: George A. Halfpap, Sr. Sales manager: George A. Halfpap Jr.

Plant: Upper Marlboro

Package: exterior walls with windows glazed; exterior doors prehung with hardware; interior partitions assembled; roof trusses assembled; floor joists precut and notched; roof panels; carports; joists and rafters; floor panels; precut roofing, siding, insulation, flooring, interior trim, cabinets, interior doors; wall ovens; finish hardware.

#### MARYLAND HOUSING CORP.

Baltimore, Md.

President: Joe C. Browne Sales manager: Andrew Soellner Plant: Baltimore

Package: smaller - than - room - size exterior panels with sheathing and insulation; windows in place and glazed; all doors prehung with hardware; roof and partition panels; trusses; electrical wiring; garage.

#### PRECISION BUILT HOMES, INC.

Baltimore, Md.

President: William F. Chew Sales manager: Roy H. Robertson

Plant: Baltimore

Package: full length exterior panels sheathed, sided and insulated; windows in place and glazed; prehung doors with hardware; storage walls; panels for partitions and floors; trusses; finished ceiling applied; wiring in; plumbing assembly; garage or carport.

Optional: heating, bath fixtures,

vanity-lavatories.

#### Massachusetts

FRANKLIN HOMES, INC.

Franklin, Mass.

President: Elmer Swenson Sales manager: Frank Sullivan Plant: Franklin

Package: room-size exterior panels sheathed and sided; windows in place and glazed; prehung doors with hardware; partition panels; trusses; storage walls; precut roof sheathing; garage or carport.

Optional: bath fixtures, vanity-lavatories, birch cabinets, ranges gas and electric built-ins, heating plant,

#### HODGSON HOUSES, INC.

Dover, Mass.

President: Kenneth W. Spalding Sales manager: Richard L. Spalding Plant: Dover

Package: larger-than-room size terior panels, sheathed and sided; windows in place and glazed; prehung doors with hardware, precut partitions, roof sheathing, subfloor panels.

Optional: garage or carport.

#### NEW ENGLAND HOMES INC.

Bellingham, Mass.

President: Kelton O. Potter Sales manager: Lewis L. Stead Plant: Bellingham

continued on p. 176

Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; all doors prehung with hardware; roof trusses; partition panels; roofing, flooring, interior trim. Optional: built-in range; kitchen

#### PRE-BILT CONSTRUCTION, INC. North Dartmouth, Mass.

President: Joseph Blum Sales manager: David Schwartz Plant: North Dartmouth

Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; insulation in; all doors prehung with hardware; precut roof panels; joists and precut rafters: garages: precut trim; precut roof sheathing; precut floor panels.

Optional: bathroom fixtures, heating plants and ducts, electrical wiring.

#### TECHBUILT, INC.

Lexington, Mass.

President: Carl Koch Sales manager: Paul Herrick Plants: Concord, Mass.; Huntington, L. I.; Urbana, Ill.; Grand Island, Neb.; Whittier, Calif.

Package: modular wall panels 4' and 8' wide with sheathing; glazed window units; all doors prehung with hardware; floor and rafters, stairs; heating plant; wiring; garage or carport

Optional: air conditioning.

#### Michigan

#### A. J. COOK LUMBER CO.

Holland, Mich.

Brand: Insul-Stud Homes President: Alvin J. Cook Plant: Holland

Package: exterior room size panels or larger with full 1/2 inch insulating panel between studs to allow sheathing and interior surfaces to be applied on site; precut roof panels; precut interior partitions; garages; precut floor joists, ceiling joists,

#### MANUFACTURED HOMES, INC. Marshall, Mich.

Brand: Permabilt President: Louis E. Legg Sales manager: Vern C. McMahan Plant: Marshall

Package: exterior wall panels smaller than room size with windows and doors installed; roof trusses; garages; precut plates, ceiling and floor joists, plywood roof sheathing; own finance company, Home Assistance Corp.

#### MICHIGAN LUMBER FABRICA-TORS, INC.

Elkton, Mich.

President: N. J. Smith Sales manager: B. G. Wiley Plant: Elkton

Package: complete floor system: room size and smaller exterior panels with sheathing applied; choice of exterior siding; assembled partitions, roof trusses and gables; prehung exterior and interior doors with hardwood applied; prehung combination doors; aluminum or wood windows glazed, with screens and storms, Thermopane picture windows, interior and exterior trim.

Optional: gypsum dry wall; insulation: kitchen cabinets, chimney; complete heat system; bath fixtures and accessories.

#### MODERN HOMES CORP.

Dearborn, Mich.

President: Robert J. Lytle Sales manager: Ralph L. Dabe Plants: Dearborn; Port Jervis,

Package: room size and smaller exterior panels, sheathed, sided and prime painted; windows in place and glazed; insulation in; prehung doors with hardware; floor panels: prefabricated steel bar joists for floors; trusses; precut partitions; cabinets: vanity-lavatories; garage or carport; Acceptance Corp.

Optional: power operated windows, acoustical ceiling, heating, air conditioning.

#### SECURITY HOMES MFG. CO.

Kalamazoo, Mich.

President and sales manager: Fred J. Sopjes

Plant: Kalamazzo

Package: smaller-than-room-size exterior panels with sheathing; windows in place and glazed: prehung doors with hardware; partition panels; storage walls; trusses or precut joists and rafters; precut framing materials, roof sheathing; garage or carport; birch kitchen cabinets.

Optional: chimneys, furnace kit, floor tile and wall tile, aluminum storm-screen combinations.

Seney, Mich.

President: Milo F. Gonser Sales manager: Robert Esler

Plant: Seney

Package: smaller-than-room-size panels with sheathing; glazed window units ready for installation; partition panels; trusses; floor and roof panels: storage walls: cabinets: vanity-lavatories; garage or carport.

#### SERVICE HOME MFG. CO.

Grand Rapids, Mich.

Brand: Service Homes President: Lyle Hoogeboom Sales manager: Philip LeBlond Plant: Grand Rapids Package: exterior walls assembled

with insulation, sheathing on; interior walls assembled, studding and plates only; all doors prehung with hardware; separately shipped windows; trusses; garage or carport; precut joists and rafters; precut stairs; kitchen cabinets, chimney, ventilating hoods.

Optional: heating, built-in range and refrigerator.

#### UNIVERSAL HOMES, INC.

Detroit, Mich.

Brand: Universal Production Engineered Homes
President: W. G. Brownlee

Sales manager: Ralph Lynch Plant: Milan, Mich.

Package: exterior wall sections sheathed and sided; doors and windows in place; partition panels; trusses and precut roof sheathing; precut floor joists and sheathing; garage or carport.

#### Minnesota

#### ASSOCIATED HOMES MFG. CO.

Minneapolis, Minn.

President: Lyle A. Murray Sales manager: E. C. Wilhelm

Plant: Minneapolis

Package: exterior wall panels of room size completely sheathed and sided; insulation in; roof trusses; joists and precut rafters; precut partitions and wall panels; carports and precut garages.

#### NORTHERN HOMES & LUMBER

Minneapolis, Minn.

President: C. W. Merchant Sales manager: R. L. Nelson Plant: Minneapolis

Package: exterior walls with girts applied for sheathing on site; windows shipped separately; roof trusses; roof sheathing; asphalt shingles; rough and finish hardware; assembled gable ends; precut material for flooring, hip roofs and trim; interior partitions assembled; carports.

Optional: cedar siding, insulation, medicine cabinets.

#### PAGE & HILL HOMES, INC.

Shakopee, Minn.

President: Roger R. Page Vice president (sales): M. D.

Plants: Shakopee; Albert Lea; Waterville, Minn.

Package: room size exterior panels completely finished: complete partitions; windows; prehung doors with hardware; storage walls; gable or hip roof panels; ceiling panels; most trim installed, some precut: bath accessories.

#### Missouri

#### HOME BUILDING CORP.

Sedalia, Mo.

Brand: HBC Homes President: Neal O. Reyburn Sales manager: Arthur Dahlman Plant: Sedalia

Package: larger - than - room - size panels with both exterior and interior finish applied and painted; glazed windows installed; doors prehung; storage walls mahogany; all interior mahogany woodwork prefinished; linoleum applied to floor in kitchen and baths; house completely plumbed and wired; roof and ceiling in panels and prefinished; all joists self-concealing; footage from 707 sq. ft. to 1,600

Optional: heating plant.

#### MODULAR HOMES, INC.

Kirkwood, Mo.

President: Burton W. Duenke General manager: G. W. Mefferd Plant: Kirkwood and Valley Park, Mo.

Package: exterior wall panels smaller than room size completely sheathed and sided; windows in place and glazed; all doors prehung with hardware; joists and rafters; partition panels and storage walls; garages and carports: kitchen cab-

Optional: vanity-lavatories, built-in range, built-in or wall-hung refrigerator

#### READY-MADE BUILDINGS, INC.

President: John L. Polston Sales manager: Ted Hoffman Plant: Joplin

Package: exterior wall panels room size or smaller; windows in place; doors prehung with hardware; roof trusses: joists and rafters: roof and floor panels; partition panels; storage walls; garages and carports; kitchen cabinets; exterior siding; precut interior studding, drywall. Optional: built-in range, vanitylavatories.

#### WILSON HOMES, INC.

St. Louis County. Mo.

President: Clarence T. Wilson Plant: St. Louis County

Package: room size exterior panels with sheathing and insulation; windows in place and glazed; all doors prehung with hardware; assembled trusses; partition panels; storage walls; precut roof sheathing: cabinets: bath accessories: some kitchen appliances; garage or carport.

Optional: floor panels, joists and rafters; air conditioning.

#### Nebraska

#### PERMCO MFG. CO.

Peru, Neb.

Brand: Perma-Bilt Homes President: Peter G. Holdorf Plant: Peru

Package: room size exterior panels with sheathing; window and door openings framed; partition panels; trusses; precut roof sheathing, floor joists and subflooring; storage walls; precut soffits; eaves and cornices made up in sections; garage or carport.

#### **New Jersey**

#### PLYMOUTH HOMES, INC.

Hillside, N. J.

President: Norman Libman Sales Manager: A. Greenspan Plant: Hillside

Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; insulation in; precut roof and floor; garages and carports.

#### PRESIDENTIAL HOMES, INC.

Pemberton, N. J.

President: Richard L. Duffield Vice president: Harry C. Smith Sales manager: Donald J. Peters Plant: Pemberton

Package: room size and smaller exterior panels with sheathing and insulation; windows in place and glazed, except for fixed lights; partitions framed and assembled; precut floor and roof components; garage or carport, Split-levels; ranches; Cape Cods.

#### WELL BUILT MFG. CO., INC.

Somerville, N. J.

President: Edward A. Chandler

Plant: Somerville

Package: exterior wall panels with siding and sheathing; windows; front and service door installed; precut interior framing and sub-flooring; also ships precut shell of house package.

#### **New York**

#### ALLEGHENY HOMES CORP.

Homer, N. Y.

President: Stanley T. Nadolski

Plant: Homer

Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; insulation in: interior gypsum applied; all doors prehung with hardware; storage walls; roof panels; garage or carport; joists and rafters; partition panels; precut floor system.

Optional: plumbing fixtures: heating: air conditioning: appliances.

#### BARDEN & ROBESON CORP.

Middleport, N. Y.

President: Bryce Barden Sales manager: Robert Kruger

Plant: Middleport

Package: exterior wall panels of room size completely sheathed; siding field applied; windows in place and glazed; insulation in; interior gypsum applied; all doors prehung with hardware; complete house nanelized.

#### BUSH PREFABRICATED STRUC-TURES, INC.

Huntington Station, N. Y.

President: Clinton G. Bush Plants: Huntington Station; Glen Cove, N. Y.

Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; insulation in; interior gypsum applied; all doors prehung with hardware; storage walls; stair systems; cabinets; trusses; roof panels; garage or carport; joists and rafters; partition panels; floor panels; precut trim. Sometimes ships completely precut package. Optional: heating, wiring.

#### FEDERAL HOMES CORP.

New York City

President: Chris D. Geisler Plant: Canaan, Conn.

Package: smaller-than-room-size exterior panels sheathed and sided; prehung windows, doors with hardware: partition panels: roof and floor panels, trusses; storage walls;

#### IVON R. FORD, INC.

McDonough, N. Y.

Brand: Ford Homes President: Ivon R. Ford Sales manager: H. C. Belmore

Plant: McDonough

Package: wall-size and smaller panels with sheathing; partition panels: roof trusses and panels; finished floor panels; insulation and wiring installed; windows in place; prehung doors; storage walls; ceiling panels; precut trim.

Optional: heating plant; kitchen cabinets.

#### GALVIN HOMES, INC.

Rochester, N. Y.

President: John Galvin

Plant: Rochester

Package: exterior wall panels of room size completely sheathed; all doors prehung with hardware; precut rafters and joists; partition panels; storage walls; garages and carports.

#### GENERAL HOMES

Huntington Station, N. Y.

President: Clinton G. Bush Plant: Huntington Station

Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; insulation in; interior gypsum applied; all doors prehung with hardware; window walls; stairs; cabinets; trusses; storage walls; roof panels; garage or carport; joists and rafters; partition panels; floor panels; precut trim. Optional: wiring, appliances,

#### NORTHERN HOMES, INC.

Hudson Falls, N. Y.

President: Thomas I. Eastwood Plant: Hudson Falls

Package: room size and smaller exterior panels with sheathing; exterior windows and doors in place; 4' partition panels; floor panels with subflooring; partial trusses; precut joists and rafters; garage or

#### **North Carolina**

#### WRIGHT HOMES, INC.

Durham, N. C.

President: Richard H. Wright, III Plant: Durham

Package: exterior wall panels of room size completely sheathed; windows in place and glazed; all doors prehung with hardware; trusses; storage walls; roof panels; carports; partition panels; precut floor panels.

#### Ohio

#### CONTINENTAL HOMES, INC.

Toledo, Ohio

President: John H. Shuev Sales manager: Arthur W. Amsler Plant: Toledo

Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; all doors prehung with hardware; roof trusses and panels; joists and rafters; partition panels; garages or carports; precut plywood roof sheathing, floor system, facia.

#### DUNBAR INDUSTRIES, INC.

Toledo, Ohio

President: R. G. Dunbar Sales manager: Niel T. Jones Plant: Toledo

Package: exterior modular 4' wall panels with sheathing applied; windows in place and glazed; insulation in; all doors prehung with hardware; complete gable ends; floor panels; roof trusses, plywood roof sheathing, and gypsum supplied; interior partitions room size; precut lumber, floor joists, girders, stair: own Mortgage Corp.

Optional: prefinished birch kitchen cabinets, attic exhaust fans, steel oven and range, chimneys, asphalt floor tile.

#### EXPAN HOMES, INC.

Cleveland, Ohio

President: Alex Bruscino Sales manager: Minor F. Monroe Plant: Cleveland
Package: exterior wall panels of

room size completely sheathed and

sided; windows in place and glazed; interior doors prehung; trusses; gables asembled; interior partitions; overhang soffits.

#### H. C. HUBER CONST. CO.

Packaged Homes Div.

Dayton, Ohio

General manager: Robert Miller Sales manager: Edward Kostic

Plant: Dayton

Package: room size exterior panels open-framed: prehung doors: partition panels; roof panels; all finishing lumber precut; garage. Optional: heating, air conditioning.

#### INDEPENDENT LUMBER CO.

Cleveland, Ohio

Brand: Heritage Homes General Manager: G. H. Ballinger Department manager: Wm. A. Bopp.

Plant: Cleveland

Package: modular 4' exterior panels with sheathing; window walls to 12': windows in place and glazed: prehung doors with hardware; partition panels; trusses; precut joists, rafters, roof sheathing, floor and deck; gables; cabinets; garage or carport.

#### INLAND HOMES CORP.

Piqua, Ohio

President: E. E. Kurtz Vice president (sales): Roy E. Hunsaker

Plants: Piqua: Hanover, Pa. Package: room-size exterior panels sheathed and sided; windows in place and glazed; prehung doors; partition panels; storage walls; trusses; roof and floor panels; joists, rafters, and all floor materials precut; all interior finish and trim; soffits; heating plant; garage. Mortgage Corp.

Optional: air conditioning.

#### INTERNATIONAL HOMES, INC.

Youngstown, Ohio

President: Myron Agrenovitz Sales manager: E. B. Osterhout Plant: Mineral Ridge, Ohio Package: larger-than-room-size exterior panels sheathed and sided; windows in place and glazed; prehung doors; partition panels; trusses; roof panels with sheathing; storage walls: garage or carport. Optional: heating plant.

#### METROPOLITAN HOMES, INC.

Springfield, Ohio

President: Charles E. Fry Plant: Springfield Package: room size exterior panels complete except for final paint coat; partition / panels framed only; trusses; storage walls; carport.

#### MIDWEST HOUSES, INC.

Mansfield, Ohio

President: John L. Morley Vice president (sales): T. G. Bar-

Plants: Mansfield; Lexington, Ohio Package: smaller-than-room-size exterior panels with sheathing; windows in place and glazed; prehung doors; partition panels, trusses, floor panels; vanity-lavatories; garage or carport.

Optional: kitchen built-ins and appliances.

#### PEASE WOODWORK CO., INC.

Hamilton, Ohio

Brand: Pease Homes President: John W. Pease Plant: Hamilton

Package: smaller-than-room-size exterior panels sheathed and framed; window and door openings framed; partition panels; trusses; precut beams, bridging, trim, roofing, siding, birch kitchen cabinets, and millwork.

Optional: attached or detached garages; carports; various kinds and styles of windows, doors, and sidsions; steel kitchen cabinets; and vanity-lavatories. ing materials; wider roof exten-

#### SCHOLZ HOMES, INC.

Toledo, Ohio

President: Donald J. Scholz Sales managers: (West) Bernard Perry; (Central) Harry Leggett; (East) James Hyde

Plants: Toledo; Wilmington, Del.; Seattle. Wash.

Package: smaller - than - room - size exterior panels sheathed and sided; windows in place and glazed; insulation in; interior gypsum applied; prehung doors with hardware; partition panels: storage walls: floor and roof panels; kitchen cabinets; double glazing; garage or carport;

Acceptance Corp.

Optional: bath fixtures, vanity-lavatories, plumbing, heating, electrical wiring, air conditioning.

#### STYLE-RITE HOMES CORP.

Columbus, Ohio

President: W. L. Mainland Vice president and sales manager: W. J. Kuehnel

Plant: Columbus Contemporary package: 8' wide wall panels sheathed, sided and insulated; windows in place and glazed; prehung doors with hardware; partition panels; insulated ceiling panels with finished ceiling; precut roof rafters and beams; precut window and door casings; carport.

Ranch line package: 12' wide wall panels, sheathed, sided and insulated; windows in place and glazed; prehung doors with hardware; partition panels; built-up 4/12 slope roof trusses; precut door and window casings.

Optional: attached garage, carport

#### THE THYER MANUFACTURING CORP.

Brand: Thyer Homes

Toledo, Ohio President: Frank Thyer
Sales Managers: N. N. Wiebusch, northern div.

Scott Grant, southern div. Plants: Toledo: Jackson, Miss.

Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; all doors prehung and routed out for hardware: all exterior trim prime coated; interior partitions without finish; prebuilt trusses; prebuilt gable ends; roof trusses; storage walls; roof panels; precut floor joists; subfloor; garages and carports.

Optional: bathroom fixtures, heating plants, kitchen cabinets, bath wall finish, attic fan, exhaust fan, bathtub door, storm doors and windows, double glazing.

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#### A. You clip these wall panels on the studs

Want a wood paneled room in a package? You can get it from US Plywood and it's called Plankweld. Planks are just over 16" wide, the spacing between most wall studs. To install, all you do is nail a series of specially designed clips to the studs and fit the planks into the clips.

Wood choices range from fine Weldwood hardwoods like birch, walnut, oak and Korina to Philippine mahogany and knotty pine. US Plywood Corp. New York City.



#### B. These panels interlock to form interior walls

Lockwall panel is designed in 7' and 8' lengths. White pine is run through a molder to pattern, carefully cut at the factory, and matched and beveled to complete pattern work. Stock is then assembled to make a panel 32" wide in lengths given above. Furring strips about 36" long are glued to back of panel, extending about 2" over edges and spaced or notched so panels will interlock. When paneling is started in a room corner, furring strips on one side are sawed off flush with panel edge. With studs 16" o.c., furring strips will extend from opposite edge of 32" panel over a stud. Furring strips are nailed to stud, then interlocked to the next panel. Openings are sawed out just as in Sheetrock or plywood applications. Company says if it is necessary to saw between furring strips below end joint, a short piece may drop out but can be replaced in position above or below the opening.

Panel can be installed on waterproofed block or concrete basement walls, over old wall coverings, on ceilings, wainscots. Knotty Idaho white pine panels 32 x 96" cost about \$7 each. Same size panels in clear Idaho white pine are about \$9.50 each. Company is also experimenting with inland red cedar. Potlatch Forests, Inc.



#### c. Pool's walls go up in four hours

Precast Amcrete pool (20 x 40' size is shown above) can be built in large developments or in private residences. On a fully steel-reinforced poured-concrete floor, with keyways left for panels, precast buttresses are set at the joints of every wall over 20' long, to make a cantilever support for wall sections. Then first precast section is lowered into place. Wall panel, set in keyway, is bolted to buttress and dovetails into next panel. Precast panels need no surfacing other than a rubber-base paint. Company says walls of the 20 x 40' pool can be set in place in less than four hours; on a 45 x 105' pool, walls can go up in a day. Amcrete Corp., Port Chester, N.Y.



#### D. Here's a new fireplace in a package

Prefabricated Majestic Thulman fireplace now offers all the parts you need for a finished installation that can be completed in three hours, company claims. The new factory-made accessories include: base platform, hearth (with or without tile), red brick or black glass surround, flexible screen and basket grate. New accessories mean you can buy a complete, packaged fireplace from hearth to roof. The Majestic Co., Inc., Huntington, Ind.

continued on p. 191

#### READY HUNG DOORS

#### JUST RIGHT ... MITRE TIGHT

Precision Manufactured On Specially Designed Machinery... **Production Line Assembled** By Experts.



FROM THE FACTORY





#### CRATED\*FOR DELIVERY IN PERFECT CONDITION



Tension in the steel band exerts equalized pressure (indicated by the arrows) at the corners to draw the frame in tight contact with the rigid door. Frame joints and mitres are therefore rigidly held square and tight by the door itself.

Spacer blocks between the door and frame serve a dual purpose: (1) They block the frame around the door during shipment, and, (2) Are used to maintain proper door clearances while the door is being installed. Faces are protected by cardboard when shipped by common carrier.

\*PAT. NO. 2489029

#### READY HUNG DOORS MADE BY THESE LEADING WHOLESALERS

ALBANY, N. Y. Iroquois Millwork Corp. BALTIMORE, MD. Central Building Supply, Inc. CINCINNATI, OHIO BIRMINGHAM, ALA.
National Woodworks ,Inc.
BOSTON, MASS.
A. W. Hastings & Co., Inc.
Somerville 44, Mass.

CHICAGO, ILL. DENVER, COLO.
Morgan Sash & Door Co. Lumber Dealers, Inc.

Acme Sash & Door Co.

CLEVELAND, OHIO The Whitmer-Jackson Co. HOUSTON, TEXAS Massillon, Ohio Southwest Sash &

BUFFALO, N. Y. Iroquois Door Co. The Whitmer-Jackson Co., Inc. Dayton Sash & Door Co.

GRAND RAPIDS, MICH.
Porter-Hadley Company HUNTINGTON, WEST VA. Iron City Sash & Door Co.

Southwest Sash & Door Co.

INDIANAPOLIS, IND. OAKLAND, CALIF.
Midland Building Industries, Inc. Ready Hung Door Mfg. Co.

LOS ANGELES, CALIF. Burbank

MARÍON, IND. General Millwork Corp.

NEW YORK, N. Y. Bailey-Whalen Co. West Orange, N. J.

DAKLAND, CALIF.

PITTSBURGH, PENN. Ready Hung Door Mfg. Co. Iron City Sash & Door Co. ROCHESTER, N. Y. The Whitmer-Jackson Co., Inc. SAGINAW, MICH. Flint Sash & Door Co., Inc. SAN ANTONIO, TEXAS

Ready Hung Door Mfg. Corp. SEATTLE, WASH. Acme Millwork, Inc. Kirkland, Wash.

HOUSE THE TO

SIOUX FALLS, S. DAK. Jordan Millwork Co.

SPRINGFIELD, MO.

Southern Supply Company ST. LOUIS, MO. Imse-Schilling Sash & Door Co.

ST. PAUL, MINN. Minnesota Wood Specialties, Inc. St. Paul Park, Minnesota SYRACUSE, N. Y. Iroquois Door Co.

TOLEDO, OHIO Allen A. Smith Co.

TORONTO, CANADA C. Lloyd & Son Limited

WACO, TEXAS Frank Stevens Sash & Door Co.

CALL YOUR LUMBER DEALER

#### WEAKLEY MANUFACTURING

Newark, Ohio

President: Robert K. Weakley Plant: Newark

Package: room size exterior panels sheathed and sided; windows in place and glazed; interior gypsum applied; partition panels; trusses and precut roof sheathing; precut floor framing and exterior trim; electric outlets with pull wires installed; garage.

#### Oklahoma

#### SOUTHERN MILL & MANUFAC-TURING CO.

P. O. Box 1087, Tulsa, Okla.

Brand: Southern Mill Homes President: W. H. Ahrens Sales manager: Joe W. Fellers Plant: Tulsa

Package: room length walls and partitions; windows and exterior doors glazed and hung; hardware applied; lining site-applied after wiring installed; trusses; roof panels; cabinets and all other materials to make complete house except plumbing, heating, wiring and painting.

Optional: vanity-lavatories, air conditioning,

#### Oregon

#### WESTERN MILLS, INC.

Beaverton, Ore.

Brand: Westcut Homes
President: Aubrey P. Schmidt

Plant: Beaverton

Package: room size and smaller exterior panels with sheathing, siding and insulation; windows in place; all doors prehung with hardware; semi-assembled trusses; vanity-lavatories; garage or carport; furnish interim and permanent financing. For export all materials are precut.

#### **Pennsylvania**

#### ADMIRAL HOMES, INC.

West Newton, Pa.

President: Frank A. Baldus Sales managers: E.R.L. Palm, Vince Miller, Wm. S. Brown Plant: West Newton

Package: up to 30' exterior panels sheathed and sided; windows in place and glazed; prehung doors with hardware; prefabricated gables; interior framing; precut floor materials; partially precut ceiling and roof materials; garage or carport. Acceptance Corp.

Optional: bath fixtures, kitchen equipment.

#### AMERICAN HOUSES, INC.

Allentown, Pa.

President: J. R. H. McDonald Sales manager: J. F. O'Sullivan Plants: Allentown; Lumberton, N. C.; Cookeville, Tenn.

Package: smaller-than-room-size exterior panels with insulations and sheathing; window walls; floor and partition panels; windows in place and glazed; prehung doors with hardware; storage walls; precut closet shelves; carport or garage. Optional: air conditioning, lavatories, kitchen cabinets.

#### COTTMAN PLANNED HOMES, DIV. COTTMAN BUILDERS

Philadelphia. Pa.

President: Marvin Orleans
Sales managers: Manuel Honig, precutting

Sherman Wagman, prefabbing Plant: Philadelphia

Package: completely precut house or exterior wall panels with sheathing applied, windows and doors in place; interior partitions assembled; prehung interior doors; factory assembled stairs; all rough and finish hardware; garages; all material to completely finish house except paint. Mortgage Corp.

#### CRESTWOOD HOMES CO.

Greenville, Pa.

President: C. F. Neubauer Sales manager: C. D. Rissell Plant: Greenville

Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; all doors prehung with hardware; roof trusses; partition panels; garages or carports; precut floor and ceiling joists, rafters, sub-floor; window walls; storage walls; furnish interim and assist with permanent financing.

Optional: plumbing fixtures, heating plants and ducts, air conditioning, wiring built-in or free standing kitchen appliances.

#### HOG ISLAND LUMBER CO.

Philadelphia, Pa.

Brand: Hilco Homes
President: Martin Cohen

Sales manager: Jerome J. Drucker Plant: Philadelphia

Package: smaller-than-room-size exterior panels with sheathing; insulation in; precut joists, rafters, interior studs; windows; doors.

Optional: garage or carport, bath fixtures, vanity-lavatories, heating, wiring, cabinets.

#### HORSTMAN, INC.

Erie. Pa.

President: Herman Horstman Jr. Sales manager: Glen Q. Ripley Plant: Erie

Package: exterior 12' wall panels completely sheathed; room size interior partitions; precut joists and rafters; windows ready for installation; roof trusses; garages; stairs; gable ends; precut wood bridging and cornice.

Optional: bathroom fixtures, builtin range, vanity lavatories, heating plants and ducts.

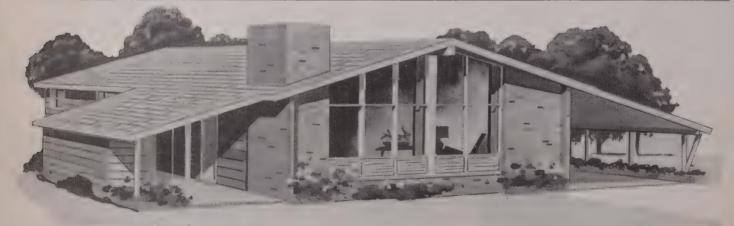
#### MAIN LINE LUMBER & MILL-WORK CO.

Wayne, Pa.

Brand: Main Line Homes
President: Ralph K. Madway
Sales manager: Herbert L. Gross
Plants: Wayne; Philadelphia, Pa.
Package: exterior wall panels fully
sheathed; windows assembled and
glazed; doors ready for installation; precut rafter and ceiling
joists; trim; interior partitions;
garages and carports; subflooring
and finished flooring; roofing and
siding.

Optional: bathroom fixtures, prefab chimneys, heating plants and ducts, air conditioning, refrigerator and range.

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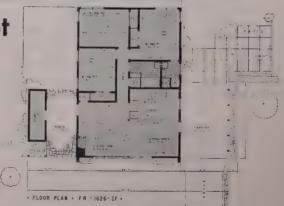


Shown here is The Franklin Roosevelt, a three-bedroom Lesco
Home that reflects a popular new concept in contemporary styling. Cathedral
ceilings add charm to the functional interior design. Exterior storage, porch and
carport give maximum livability at a minimum cost. Architect-designed in over
30 styles, Lesco Homes go up easily, sell quickly—with two-, three- and four-

bedroom styles package-priced at \$4,000 to \$12,000. Completely approved; easily financed. For more information, write: Dept. HH-12.



THE LINE OF THE PRESIDENTS



ONE OF THE SOUTH'S LARGEST MANUFACTURERS OF HOMES ...

Serving and Selling builders in Virginia, North and South Carolina, Kentucky, District of Columbia, Delaware, Maryland, Tennessee, West Virginia and Georgia.

## AIR CONDITIONING SELLS TODAY'S HOMES



"Air conditioning has been a big factor in home sales," says Mr. Sheppard, "especially after the success of the Air Conditioned Village here in 1954. Customers dictate specifications, and in this area homes priced from \$16,000 without air conditioning are at a definite sales disadvantage."

Builders Development Corp. is jointly owned by 8 outstanding Austin, Texas, builders. Using combined resources, they purchased a 535-acre tract known as Boston Hills, which is opening into one of the most exclusive developments in the state. Air conditioned exclusively with Typhoon units, Boston Hills, when completed, will be the largest air conditioned development in the country.

"In Austin, a home without air conditioning is obsolete

now," continues Mr. Sheppard. "Home buyers insist on it almost every time."

Use these survey facts to help sell the air conditioned homes you build When Du Pont asked owners what they enjoyed most about their air conditioning, these were some of the answers given:

Feeling of coolness41%	Rooms clear of dust8%
Sleep much better22%	Feel more efficient at work 7%
Freedom from humidity 9%	Family enjoys home life more . 7%

Du Pont's new market survey, from which these figures were taken, was conducted among urban and metropolitan households. Figures represent per cent of respondents who now own air conditioning. Only leading reasons are shown.

## Why you should always insist on units charged with "Freon"\*



• Mr. Sheppard specifies 3- and 5-ton Typhoon units charged with "Freon". They are remarkably free of breakdowns and adaptable to homes in Texas. Exterior condenser-compressor unit (shown above) cools home when outside temperatures go to 110°F.

When you select air conditioning units for the homes you build, don't take the refrigerant for granted. No component is more essential to the efficient, trouble-free operation of air conditioning equipment. That's why it's so important to specify Du Pont "Freon" refrigerants for the air conditioning equipment you install.

When you specify a "Freon" refrigerant, you can be sure it will not give you any trouble from acids or moisture. Du Pont's 25-year experience manufacturing "Freon" is your assurance of unsurpassed quality and purity. And you can be sure "Freon" refrigerants are safe—nonflammable, non-explosive, virtually nontoxic.

So plan to include air conditioning in the homes you build and, when you do, insist on a dependable Du Pont "Freon" refrigerant for the cooling system.

Learn how air conditioning has helped others to sell homes. Send for the Du Pont brochure "What Successful Builders Think of Home Air Conditioning." For your free copy, write to E. I. du Pont de Nemours & Co. (Inc.), "Kinetic" Chemicals Division 1212, Wilmington 98, Delaware.



## SECTIONAL GARAGE DOORS. COMMERCIAL to blend with any architecture to fit any STURDY opening, both residential and commercial WE DE COM ALL DOORS FEATURE THE FAMOUS Wedge Tight for fast installation, easy operation. Even a child can open and close a Calder door, yet it fits like part of the wall. FLUSH Sold direct to dealers; backed by extensive national advertising. Warehouses in: Lancaster, Pa. and Chicago, III. Free! Catalog gives complete specifications on Calder's full line. Calorlog shows LEVELINE the Calder way to achieve custom effects without custom costs when home owners want decorated garage doors. Send for your capies Every Calder door can be equipped with extension or torsion springs and RAISED PANEL can be electrically operated and radio controlled.

MANUFACTURING CO., Lancaster 15, Pa.

## DIRECTORY (continued)

### TOWN & COUNTRY FABRICA-TORS, INC.

Pittsburgh, Pa.

Brand: Town & Country Homes President: Sidney Bloom Sales manager: Jerome S. Weisman Plants: Pittsburgh; Clairton, Pa. Package: exterior wall panels to 30' sheathed and sided; steel casement windows in place and glazed: all doors prehung with hardware; joists and rafters; precut hip or gable roof; assembled stairs; roof sheathing, shingles, finished hard-

Optional: plumbing, heating, wiring, appliances, aluminum or wood casements, birch kitchen units, mar-

ware, trim, flooring, insulation,

## **South Carolina**

DARGAN LUMBER MFG. CO. DARGAN LU-RE-CO HOMES DIV. Conway, S. C.

President: E. Ervin Dargan Sales manager: T. A. Snyder Plant: Conway

Package: exterior wall panels sheathed and insulated with windows in place and glazed and doors prehung; roof trusses; all other lumber and hardware supplied for finishing on site.

## South Dakota

### BUCKINGHAM WOOD **PRODUCTS**

Rapid City. S. D.

Brand: Midwestern Homes President: Glen O. Buckingham Sales manager: W. P. Myhren Package: exterior wall panels completely sheathed; all doors prehung with hardware: trusses: roof panels: garage or carport; partition panels; precut floor joists; bridging; truss materials; back-up materials; interior trim materials.

Optional: plumbing package, heatting package, air conditioning, wiring package, appliances.

## Tennessee

FAIRHILL, INC.

Memphis, Tenn.

President: Charles H. Freeburg Sales manager: P. A. McCarthy

Plant: Memphis

Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; insulation in; interior doors prehung with hardware; preassembled roof trusses; prefinished cabinets; storage walls; joists and rafters: partition panels; garages and carports; precut cornice.

Optional: heating plants and ducts, air conditioning, vanity-lavatories, built-in range.

## FONDE'S BUILDERS SUPPLY

Knoxville, Tenn.

Preident: Stuart Fonde Sales manager: Ellis Mayers Plant: Knoxville

Package: exterior wall panels lessthan-room-size completely sheathed; windows in place and glazed; all doors prehung with hardware; roof trusses; joists and rafters; precut partition studs; carports; floor joists; closet fronts; bookcases; utility cabinets.

Optional: wall-hung refrigerator.

## **Texas**

### FABRICON

Austin, Tex.

President: Ned A. Cole

Plant: Austin

Package: exterior structural parts; window walls; partition panels; prehung doors; windows, sash glazed; trusses and gables; roof panels for flat deck only; storage walls and cabinets for complete interior: lavatories, vanity-lavatories; heating plant and ducts; lighting fixtures; garage or carport. Optional: air conditioning.

### HOLIDAY HOUSE MANUFAC-TURERS CORP.

Fort Worth, Tex.

President: C. Graham Schadt

Plant: Fort Worth Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed;

insulation in; all doors prehung with hardware; roof trusses; joists and rafters; partition panels; storage walls; garages and carports. Optional: heating plants and ducts air condtioning, built-in ovens and ranges, bath heaters, wall fans and ventilating hoods, kitchen cabinets, vanity-lavatories.

### HOUSTON READY-CUT HOUSE CO.

Houston, Tex.

Brand: Houston Homes President: J. C. Suttles

Plant: Houston

Package: smaller-than-room-size exterior panels with sheathing; window units; prehung doors; partition panels; trusses; garage or carport. Optional: heating, air conditioning.

### SOUTHWEST AMERICAN HOUSES, INC.

Houston, Tex.

President: M. L. Westbrook Sales manager: George E. Finch

Plant: Houston

Package: exterior wall panels of room size completely sheathed; windows in place and glazed; all doors prehung with hardware; roof trusses preassembled; cabinets preassembled; joists and rafters; partition panels; storage walls; garages and carports.

## TEXAS HOUSING CO.

Dallas, Tex.

President: Winfield Morten Sales manager: John E. King

Package: smaller - than - room - size panels sheathed, sided and insulated: windows in place and glazed: prefitted doors with hardware; panels for partitions, floor and roof; trusses; storage walls; carport, Optional: garage, heating, air contioning.

## Utah

### INTERMOUNTAIN PRECISION-BILT HOMES

Ogden, Utah

Partners: Alton E. Wade and Wallace H. Wade

General manager: Blaine Wade Sales manager: Robert Wade

Plant: Ogden Package: room size exterior panels

continued on p. 184

## small homes or large homes



YOU get more quality at less cost with

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## the FULL LINE OF HEATING AND AIR CONDITIONING EQUIPMENT

## THULMAN Fireplace AND Chimney

The modern fireplace and chimney-or chimney alone-that cuts installation time and construction costs by eliminating masonry. The fireplace, UL-labeled for safety, can be installed on a wood floor with combustible building materials butting directly against the outer casing-all clearances are built in! The chimney is an integral part of the fireplace or, as a separate chimney in the 7-inch flue size, is ideal for the venting of furnaces and other appliances-even incinerators! Listed by Underwriters' Laboratories for all fuels . . . for 1 to 2-story homes with or without basements! No footings-no special construction!

Majestic offers a single source for quality heating equipment of many types—forced warm-air furnaces, matching summer cooling units, and factory-fabricated metal fireplaces and chimneys—all at thrifty prices and all designed for quick, simplified installation to save on-the-job costs.

## A FURNACE FOR **EVERY HOME NEED**

Whatever your need or preference, you can now have the extra advantages of Majestic's quality win-

ter air conditioners. Majestic's full line includes a choice of models for homes of every size. There are automatic gas or oil units suited to every type of modern, forced-air heating sys-tem—horizontal flow, down-flow, or upflow designs. They range from 76,000 BTU output units (only 22" square at the base) to large furnaces deliver-ing nearly 400,000 BTU, Majestic's counterflow furnaces, a design so often in demand modern heating systems, de-liver rated capacities up to 200,000 BTU!

A complete line of

MATCHING AIR



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Majestic research has developed a new, interlocking control for year-around air conditioning systems that completely solves the re-humidification problem—a problem found in many home conditioning systems. Don't settle on any system until you have full details on this amazing control!

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Complete, packaged home air conditioning in matching units—twins in size and appearance—is Majestic's answer to the latest trend in build-ing year-around comfort into Ameri-can homes. Majestic's line of upflow, downflow, and horizontal flow cooling units—2- and 3-ton capacities in both water-cooled and air-cooled condensers—makes system-matching a cinch! Larger water-cooled units

CONDITIONERS

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## DIRECTORY (continued)

sheathed and sided; windows in place and glazed; partition panels; storage walls; floor panels; trusses; gables; precut trim and cornices; cabinets; prefit doors, hardware, postformed counter tops.

## Virginia

### CONTINENTAL HOMES, INC.

Boones Mill. Va.

President: Ralph C. Lester Sales manager: Earle W. Greene Plant: Boones Mill

Package: exterior sheathed and sided with insulation, preprimed; gable ends; partition framing precut; roof trusses, sheathing, shingles; windows glazed and in place; doors prehung; gypsum and taping system shipped with finish paint; all other materials for completely finishing house supplied; all plumbing materials to entry 3' outside house; heating furnace; bath and plumbing fixtures; paint. Optional: garages, carports, breeze-

## LESTER BROS., INC.

Martinsville, Va.

ways, porches.

Brand: Lesco Homes President: Lawson L. Lester Jr.

Plant: Martinsville

Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; all doors prehung with hardware; trusses; storage walls; roof panels; garage or carport; partition panels; complete door units and window units; sink tops and cabinets; precut floor joists.

Optional: plumbing, heating, air conditioning, wiring, appliances.

## Washington

## LOCTWALL CORP.

Lynnwood, Wash.

President: J. H. Bluechel Sales manager: A. J. Bluechel

Plant: Lynnwood

Package: exterior and interior wall panels smaller than room size complete with doors and windows prehung; precut sheathing; precut flooring; roof trusses; joists and rafters; storage walls; garages and carports; kitchen cabinets; shingles and siding; floor tile; precut ceiling plasterboard.

Optional: bathroom fixtures, heating plant and ducts, built-in range, built-in or wall-hung refrigerator.

## LOXIDE STRUCTURES

Tacoma, Wash.

President: Earl Rowe Sales manager: Albert J. Kemp

Plant: Tacoma

Package: exterior walls of seasoned Western red cedar in plank form grooved for insertion of spline to form both the principal structure and the finished exterior sur-face; windows and door frames furnished assembled; sash prefinished, hardware attached; roof trusses; gable ends; all other lumber to finish house supplied precut; all rough and finish hardware; kitchen cabinets; finish flooring.

Optional: hand-split cedar shakes, insulation, screens, storm sash and doors, metal kitchen cabinets, mahogany finish.

### VIRGINIA LEE HOMES, INC.

Kirkland, Wash,

President: C. F. Dally' Sales manager: R. S. Stanley Plant: Kirkland

Package: exterior wall panels smaller than room size completely sided with doors and windows in place; precut joists and rafters, roof trusses, roof panels, floor panels, partition panels, garages and carports; laminated beams, storage walls. Optional: plumbing fixtures, heating, air-conditioning, wiring,

### WEST COAST MILLS

Chehalis, Wash.

Brand: Farwest Homes Partners: Robert H. Thompson and Bennie L. Jones

Sales manager: Eldon Reiley Plant: Chehalis

Package: exterior walls 24' or smaller completely sheathed and sided; frames and sash in place; precut and partially assembled roof trusses; interior doors prehung with hardware; storage walls and wardrobes; precut flooring, roofing, joists and rafters; garages and carports.

Optional: mahogany trim, screens and storm sash, weatherstripping.

## Wisconsin

## **ELMHURST MANUFACTURING**

Janesville, Wis.

President: Charles T. Sanford Sales manager: W. O. Sanford Plant: Janesville

Package: exterior wall panels 8' to 16' completely sheathed, sided, and insulated; windows in place and glazed; house prime coated; roof trusses or rafters; joists; partition panels; storage walls; roof panels; garages and carports.

Optional: built-in range.

### MARSHALL ERDMAN & ASSO-CIATES, INC.

Madison, Wis.

Brand: Erdman Homes President: Marshall Erdman

Plant: Madison

Package: exterior wall panels of room size, sheathed and sided; windows in place and glazed; roof trusses; interior partitions; precut rafters, ceiling joists, plywood sheathing; kitchen cabinets; fur-nace; appliances; counter tops; wood flooring; interior doors. Optional: prefab plumbing.

## HARNISCHFEGER HOMES, INC.

Port Washington, Wis.

Brand: P&H Homes President: Fred J. Samerdyke Vice president (sales): W. H. Mc-Auliffe.

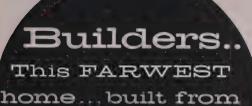
Plant: Port Washington

Package: room size panels sheathed and insulated; windows in place and glazed; room size partition panels; prehung exterior doors with combination doors and hardware; trusses and roof panels; exterior and interior trim; precut stairways; gables. Acceptance Corp. Optional: kitchen cabinets and

## UNIT STRUCTURES, INC.

Peshtigo, Wis.

Brand: Unit Constructed President: M. C. Hanisch continued on p. 210





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ROCKY MOUNTAIN . . . . 3100.00
Colo., Utah, Wyo., N. Mex.

EAST MIDWEST . . . . . . 3225.00 Ohio, Ind., Mich.

WESTERN STATES . . . . 3075.00 Mont., Idaho, No. Calif., Nev.

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Manufactured by

WEST COAST MILLS

Department L, Chehalis, Washington

## How good is aluminum 'clad' insulation?

27% to 48% better for keeping houses cool than regular paper wrapped bulk insulation, new research shows

Aluminum covered bulk insulation has long been recognized as highly efficient, especially for keeping houses cool in summer. But up to now nobody ever knew exactly how good such insulation really

Precise data on aluminum insulation is now available as a result of new research at the Pennsylvania State University where experts made exhaustive tests on aluminum vs. conventional bulk insulation. They found that:

1. Under a gable roof aluminum covered bulk insulation stops heat flow 28% more effectively than regular paper covered batts or blankets.

2. Under a flat roof, aluminum insulation (over the ceiling) reduces the heat flow by 27% (with no attic ventilation), up to 48% (with 85° attic ventilation).

These are important findings for builders and architects since the roof is the greatest single source of summer heat in most houses (it accounts for as much as 40% of the total summer heat load). So cutting the roof heat load by 27% to 48% can mean substantially cooler houses. This, in turn, can make for big savings in the size of the equipment needed for air conditioning.

## How tests were made

The Penn State research was carried out by two of the country's top thermal authorities. Professor E. R. Queer, director of engineering research for the university and Professor F. A. Joy. They used a 156 sq. ft. test house that could be fitted with either a gable or flat roof.

To simulate actual summer conditions both roofs were heated to a surface temperature of 150°. (Temperatures above 150° are often encountered with black roofs). The interior was kept at 75°. The ceiling was insulated in turn with regular kraft paper covered bulk insulation and the same kind of batts covered with perforated aluminum foil. Then a long series of heat flow readings were recorded with special instruments.

Results: With the flat roof, heat flow down through the regular insulation averaged 6 Btu's per sq. ft.; through the aluminum insulation 4.35 Btu's, or 27% less. Under the gable roof, heat flow was reduced from 6.45 Btu's per sq. ft. for the regular insulation to 4.6 for the aluminum, or 28% less.

## Test show need for attic ventilation

The initial results noted above were without attic ventilation. Even more striking reductions occurred when air was blown through the space above the insulation to simulate attic ventilation in actual houses.

Under the flat roof, for example, heat

flow through the aluminum insulation was cut from the 4.35 Btu's per sq. ft. with no ventilation down to only 1.74 Btu's or 60% lower. Ventilation also increased the efficiency of the regular insulation. But the aluminum insulation was as much as 48% more effective than the regular insulation.

For highly technical reasons, however, ventilation under the gable roof did not increase the 28% superiority of aluminum insulation over the regular batts.

The Penn State tests were sponsored by the Aluminum Company of America (see p. 161, Nov. H&H).



First all-gas packaged kitchen introduced for builder houses

The "Carefree Kitchen," jointly developed by Youngstown Kitchens, Caloric Appliance Co. and the Cribbon & Sexton Co. is based on a 3' module and is designed to meet a wide variety of arrangements.

It has built-in gas range and oven, gas refrigerator, a dishwasher and disposal unit.

The package is achieved by using continuous tops and trim and small sliding door cabinets that fit between the base and wall cabinets. Cost to builders is claimed to be "well below" that of other packaged kitchens. Complete details and photographs will be shown next month in H&H.

## Three new building materials come out of research laboratories



1. Stone sandwich wall panel, as developed by Indiana Limestone Institute, is complete through-wall panel: 3" stone face, 2" rigid insulation and natural stone aggregate on inside. It can be plastered or painted. Unit has low U factor (.12), is fireproof and needs no upkeep. Cost will be lower than competitive materials, says ILI.



2. Stone veneer wall panel, also developed by ILI, consists of 2" stone facing on 2" of wood fiber concrete. Though usable in homes, panel was designed as low cost curtain wall for small buildings and shopping centers. Like sandwich panel (left) veneer panel is in limited production with nationwide distribution planned for near future.



New pine sheathing, developed by Western Pine Assn. research laboratory, is low cost lumber product aimed at competing with fiber board and gypsum, which have eaten into lumbermen's sheathing market. Called "sheet-board," panels are made of 3/4" random size boards, sandwiched under pressure

between kraft paper facings on each side, then cut to any standard size. Photo shows 2 x 8' panels, weighing 32 lbs. each, being installed in test house. Western Pine Assn. says panels will cut labor cost by 50%, will sell for \$100 per thousand F.O.B. mill, will be available throughout US in '57.

## **New Products**

for further details check numbered coupon, p. 246



Packaged wood panel folding doors come complete with track, hardware (including screws), track backing, matching wood valance, handles and instructions for installing. These "Space-Saver Dors" have vinyl hinges, which run entire length of panels, come in two sizes, three wood choices—Alaska cedar, Western Red cedar and Philippine mahogany. Regular size (3½" panels) for home installations and giant size (5½" panels) for commercial uses are 7/16" thick. Wood Specialty Products, Inc., Arlington, Wash.



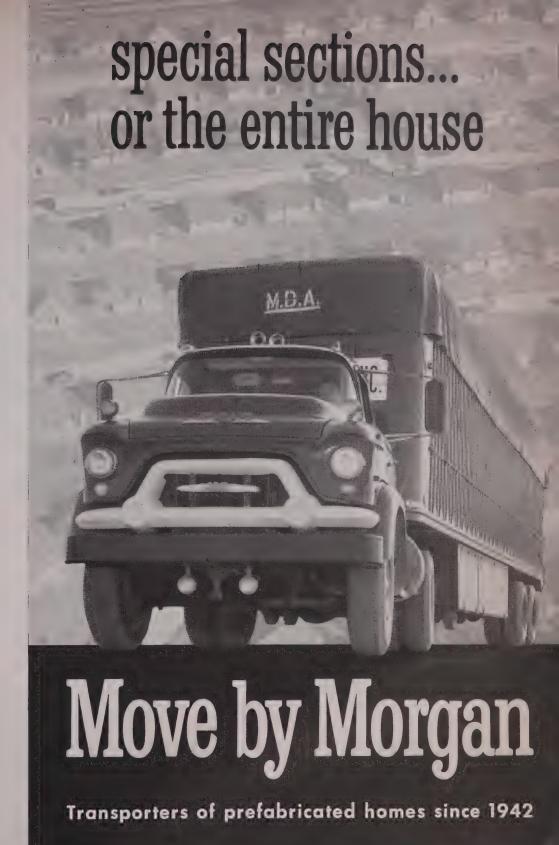
New Moen spray faucet can reduce fittings required for hot and cold water supplies in back-to-back installations to as little as six, company says. How? By removing the faucet handle, reversing faucet stem 180° and replacing handle. One handle mixing faucet lets user select flow and temperature just by turning a single handle. Faucets are available to fit kitchen sinks, lavatories, tubs and showers. Moen Valve Co., Elyria, Ohio.



Packaged multiroom air conditioner comes in 2 and 4 hp sizes, requires only a single electrical connection, no refrigeration piping and no extensive plumbing connections, company says. Mitchell's QR units are supplied complete with a ductwork package called the Mitchell Max-Cool duct system which is said to make installation errors virtually impossible. Company also announced several new features in room air conditioners, among them a "Roto Cone" a patented, self-propelled rotor that creates a sweep cooling effect by mixing gentle air currents with room air, and an "Ultra-Thin" series of air conditioners measuring 165%" from front to back, 263%" long and 21" high. Mitchell Mfg. Co., Chicago, Ill.



Portable pneumatic nailer gets its energy from compressed air and pneumatic tool manufactured by the Skil Corp. Ninety pounds of air pressure is required for top performance, three nailers can be operated continued on v. 194



When Morgan delivers your homes, you have more time to produce...and less capital tied up in non-productive services. Large outlays for trucking equipment, depreciation worries, insurance premiums, driver personnel problems, and similar headaches can be forgotten. We take over the entire transportation operation. Your costs are fixed and accountable.

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Vents equipped with separate selflocking stainlesssteel hardware.

Tubular sill construction provides maximum strength -assures level and true vent tracks.

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Maximum weather tightness assured by heavy, fully weatherstripped meeting rails and weatherstripping of entire perimeter of vents. Condensation moisture drains to outside—cannot reach window stool.

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by a 3 hp compressor. Port-A-Matic nailer has an automatic safety which doesn't release until end of unit is pressed against surface, to do away with danger of nails flying out and injuring workers. Heavy duty nailer handles up to tenpenny nails, weighs 7 8/10 lbs. Fivepenny nailer weighs 6 8/10 lbs. Magazine holds clips of nails bonded by a thermo-plastic material. \$250 for nailer, attachments cost about \$78 for different sizes of nails. Port-A-Matic Tools, Inc., Grantsburg, Wis.



е

Oven cabinet unit can accommodate 60 different built-in ovens. Surround on front of Bilt-Well cabinet can be cut to a height varying from 19%" to 41½". A second new feature is the drop-down door in cabinet base for storage. 60" high, 27" wide, 24" deep, price is about \$46.60 in Ponderosa pine and is furnished semi-assembled. For use with short oven units, a new accessory drawer fits directly below the oven to give even more storage. Carr, Adams & Collier Co., Dubuque, Iowa.



f.

Packaged hot water boiler is assembled, wired and crated at the factory. Unit includes a 525' standing radiation hot water boiler with controls, 3 gal. per minute tankless heater, 11/4" circulator, relay, 3 gal. per minute flow regulator, a Delco Model H-200 oil burner, plus normal boiler accessories. Eleven of 16 models included in new Delco Heat oil-fired boiler line are designed for hot water application with capacities from 525' to 1,260' of installed radiation. Other five models for steam application, range in capacities from 305' to 705' of installed radiation. Delco Appliance Div., GM Corp., Rochester, N Y



g.

Factory assembled Ruudiator boiler for hot water home-heating systems has an increased input rating. Model Ten Hundred continued on p. 198



The only sure way to "eliminate" the ravages of destructive moisture is with the installation of "Premoulded Membrane" during the original construction...all other methods are merely temporary "stop-gaps." When specifying or installing a vapor seal, be sure it meets these Sealtight standards of quality: permeance rating of only 0066 grains per square foot...resistant to rot, mold and termites...expandable...quickly, easily and permanently installed...ONLY "Premoulded Membrane" meets them all.

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This illustration shows how the installation of Premoulded Membrane and Corktite completely isolates the slab and superstructure from soil moisture.

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The proper installation of Premoulded Membrane and Corktite removes all danger of condensation and oxidation of metal installations in the crawl space area... eliminates the need for ventilation.



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analysis, promotion, sales counsel—all backed by down-to-earth assistance from one of the best qualified teams in the building industry. It costs you nothing to get the facts. Call, wire or write today!

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A's rating is 200,000 Btu per hr. for natural, mixed and manufactured gases; 180,000 Btu per hr. for LP gas (over a former AGA input rating of 150,000 Btu per hr.) Rating for Model Six Hundred A is 120,000 Btu per hr. (formerly 112,000 Btu per hr.) for all types of gases. Cabinets measure 40" x 24" x 14". Boiler takes up 4 sq. ft. of space, contains 1½ gal. of water. When thermostat calls for heat, heating action is said to be instant and pump-forced heat travels quickly to all

rooms. Ruud Mfg. Co., Kalamazoo 24,



Kencove vinyl wall base is now available in 96' rolls in black, brown, green, gray and sumac red. Flexible and easy to cut, the r.aterial is said to be breakproof and easily molded on the job to make both inside and outside corners. Back of the wall base is corrugated for a permanent bond when it is installed to bridge gap between walls and flooring. Material is also still packaged in 48" lengths in cartons containing 96' which will be shipped to buyers unless new rolls are specified. Black 4" is 22¢ per lin. ft.; color 4" is 30¢ per lin. ft. Kentile, Inc., Brooklyn, N.Y.



Patrician ventilating complete ventilating system: hood is available in 30", 36", 39", 42" and 48" lengths, in standard Coppertone and colors; 300 cfm axial flow ventilator removes smoke, heat, fumes and exhausts them to outside under pressure; 9" filter grille is removed easily for soap and water cleaning; underhood light has single switch that operates both light and ventilator and they can be turned on separately or simultaneously. Prewired at factory. Trade-Wind Motorfans, Inc., Rivera, Calif.



New Rangemaster hood has two 8 15/16" knock-outs in top panel so Rangemaster Ventilator can be mounted on either right or left side. Standard lengths are 24", 30", 33", 36", 39", 40", 42" and 48". You can get units in brushed or hammered antique copper, hammered dull black and stainless steel. Ventilator has fan type blade, comes with polished chrome grille. Additional toggle switch in underhood light

continued on p. 202



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can be used to operate fan. Accessories include grease filter, vertical discharge reducer, roof cap, 3-speed wall switch. Aubrey Hardware Mfg., Inc., Union, Ill.



k.

Beautywood folding doors have vertical solid panels of real wood, connected with color fast, flame resistant Geon. Each panel is hinged with a series of pantagraph self-aligning, aluminum mounting units that give smooth, even action. Floor guides and bottom tracks are not needed with the doors. Prices begin at about \$24.90. Panelford Doors, Inc., Hialeah, Fla.



1.

Slide-a-fold doors come in two or more panels of any height from a small cabinet size to floor-to-ceiling dividers. Standard two panel doors are sized for 1½, 2, 2½, and 3' openings. Four panel doors are sized for 3', 4', 5', 6' openings. Units utilize two lightweight aluminum tracks, a few upper and lower end fittings. Nylon sleeves over prefixed bushings and pivots prevent metal-to-metal contact between them and aluminum track overhead or on floor. Panels are made from solid wood, plywood, hollow plywood, woven wood strips in wood frames, plantation shutters, West Indies screens, Plexiglas, Fiberglas, glass, etc. American Screen Products Co., Miami, Fla.



n

Fleetlite sliding glass door has been engineered especially for use in northern climates. Special overhead suspension and Weatherseal application helps check winds and snow. Since door is top hung, company says special attention is paid to effective weatherstripping of door sill to prevent infiltration of melting snow, rain, air or wind-blown dirt and dust. Added protection is said to be given by use of a double sill for good water drainage and

continued on p. 206



The Borg-Warner Research Center.
Famed in fields of guided missiles, jet air flight and automotive transmissions.
Borg-Warner concentrates its vast research and engineering facilities on product developments and economies vital to the progressive home builder today.

NOW—with the Gold Key Plan—Borg-Warner opens a new era of opportunity for leading home builders. Symbolized by a key of gold, the plan combines a complete "basement to roof" line of building products—offers unparalleled benefits in terms of quality, convenience and economy, and underwrites builder reputation and profits with a policy of single source service and satisfaction, backed by one of America's leading industrial concerns. Equally important, the plan makes possible the support of a universally respected name in your localized promotion.

A representative of the Borg-Warner Builder Sales Division is ready to give you full information on the unique advantages inherent in the Gold Key Plan. Your inquiry is invited today.

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## GOLD KEY PLAN

NOW INCLUDES FIVE
ESSENTIAL PRODUCT LINES,
EACH A LEADER IN ITS FIELD,
AVAILABLE AS A PACKAGE
IOR INDIVIDUALLY) FROM
A SINGLE, DEPENDABLE SOURCE



Heating and Cooling Units



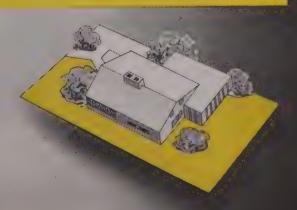


INGERSOLL-HUMPHRYES
Plumbing Fixtures



SUCCESSFUL MERCHANDISING

See The Gold Key model house!
The complete line of Gold Key products
will be on display at the NAHB Show
... booths 712 to 717 and 728 to 733 in
the Coliseum. Make plans now to
get the facts first hand.





Residential & Window Units



an inverted nonleak sill cap. Model OX or XO (one sliding and one fixed sash in 6'-10" height and 6' or 8' width costs from \$225-\$260). Full inch Thermopane or Twindow insulating glass or 1/4" plate glass can be used in the unit. Fleet of America, Inc., Buffalo 25, N.Y.



Regent model Roly-Door is an all-steel 7-section garage door in 8', 9' 10', 12' 14', 15' and 16' sizes and 6'-6" and 7' heights. Sections are made from roll-formed, cold rolled steel. Doors 12' and wider have horizontal and vertical reinforcing members welded to the sections for more strength and rigidity. Door can be painted to match house. Available with or without glass. Price starts at \$90. Morrison Steel Products, Inc., Buffalo 7, N.Y.



0.

New line of Morgan kitchens are said to be adaptable to every architectural style. Contour styling features smooth lines with flush surfaces from ceiling to floor, new-design hardware and door knobs. Doors with Tee-cor construction have core blocks placed to equalize stress in all directions. Wall cabinets are 30", 18", 15" and 12" high, 141%" deep. Base cabinets are 34½" high, 24¾" deep over-all at drawer, are furnished knocked down, unfinished, with bag of hardware. Special purpose units include tray cabinets, sliding shelf cabinets, corner and oven cabinets and peninsula and island assemblies. In birch or Philippine mahogany. Morgan Co., Oshkosh, Wis.



Masonite Seadrift interior panel incorporates random grooves and butt joints falling at a groove. Panels are  $\frac{1}{4}$ " tempered Presdwood with an embossed surface, range from 4' x 8' up to 16'. Grooves are spaced at intervals ranging from 4'' to  $7\frac{1}{2}$ ". They are  $\frac{3}{4}$ " wide at the bottom, 1/10" deep and slope at sides at  $45^{\circ}$  help assure paint adhesion. Material may be installed over a stud wall or furring strips 16" o.c. or over a solid wall with tileboard adhesive. Price is about  $25\phi$  psf. Seadrift may be finished in single or twotone paint, enamel or lacquer. Masonite Corp., Chicago, Ill.

continued on p. 210





## OIL-FIRED HIGH BOY OR GAS-FIRED HIGH BOY

A complete line of warm air units for every type of installation. Oil-fired models delivering from 75,000 to 250,000 B. T. U.'s. Gas-fired models delivering 64,000 to 90,000 B. T. U.'s. Every KAUSTINE furnace is backed by a 10-year warranty.

## OF HOMES YOU BUILD!

Sounds impossible but KAUSTINE HEATING is doing it for builders every day and here's how:

ausline

**FIRST...** KAUSTINE QUALITY is nationally recognized... you can't buy better warm air heating at any price.

**SECOND**...KAUSTINE Engineering and Factory Assembly cut your installation costs ... compact design saves valuable floor space, and ... KAUSTINE furnaces are competitively priced.

**THIRD**... You offer exacting prospects a heating plant second to none in economy, efficiency and long life.

FOR FULL INFORMATION WRITE DEPT. H-12



## TOPS IN QUALITY

There is a Kaustine Furnace or Winter

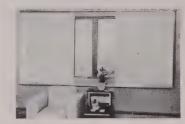
Air Conditioner for every type of home





q.

Genuine wood bonded to thin, tough fibrous paper comes in rolls 162' long, is thin enough to cut like paper. Sheer-wood comes in three widths up to 4', has a thickness of only three-thousandths of an inch. Twenty-one colors and grains can be put on plywood, wallboard, hardboard, plaster, cement, metal or plastic. Company recommends adhesives to use with each order depending upon surface to be covered. Wood is flexible enough to crease, fold around edges with or against the grain without cracking or splitting. Sheer-Wood Corp., Chicago 2, Ill.



New traversing fabric vertical blind swivels open to any desired angle in a 180° radius, draws open or shut like draperies. Patented Cayton aluminum cornice channel keeps blinds at constant spring tension at top and bottom and provides a precise rotating control on the drawn or open position, so that air, light or privacy can be selected as desired. New vertical is made in colorful DuPont fabrics 2"-5" wide. Vertical Blinds Corporation of America, Los Angeles 25, Calif.

s. Ultra-pane insulating window glass has a new sealer and built-in desiccant said to insure window tightness against air and moisture under severe test conditions. Units are available in double, triple and multiple panes of glass, can be almost any size and shape. Manufacturer says units can be shipped west of the Rockies without special pressure valves. Ultra-pane Insulating Glass, Cleveland 3, Ohio.

t. Estate Corlon. Armstrong's new vinyl plastic flooring, is now being marketed in 30" widths as counter top material. Flooring is also available in 42" widths and roll goods are available in two-yard widths, in 24" widths and 9" x 9" tile. Made on asphalt-saturated back, material is recommended for above-grade installations only. Armstrong Cork Co., Lancaster, Pa.



u.

Submersible pump uses only one pumping element—a helical stainless steel rotor turning within an abrasion-resistant fixed rubber stator, and company says this design principle enables pump to handle sand and silt without damage. Operation is similar to that of a screw conveyor. As rotor turns within stator, small cavities are

continued on p. 216

Sales manager: Lloyd B. Price Plant: Peshtigo

Package: exterior wall panels of house size completely sheathed and sided; windows in place and glazed; insulation in; all doors prehung with hardware; joists and rafters; partition panels; precut floor and roof; garages and carports,

## Canada

## BRAD INDUSTRIES LTD.

Montreal, Canada

Brand: Riley Homes
President: James Riley
Sales manager: Alan Edwards
Plant: Montreal, Canada
Package: smaller - than - room - size
exterior wall panels completely
sheathed and sided; windows in
place and glazed; insulation in;
interior gypsum applied; all doors
prehung with hardware; fish wires
in all electrical fittings.
Optional: built-in range; in export
shipments, plumbing tree.

COLONIAL HOMES. LTD.

Scarboro (Toronto), Ontario, Can-

ada

President: S. Walter Lindal Sales manager: Thomas Fergusson Plants: Scarboro and Hawkesbury, Ont.; St. Petersburg, Fla. Package: room size panels with sheathing; partition panels; precut joists, rafters; storage walls; prefabricated stairs; cabinets; garage. Also package summer cottages. Mortgage Discount Subsidiary.

## ENGINEERED BUILDING, LTD.

Calgary, Alberta, Canada

Brand: Engineered Homes
President: Harry Thompson
Vice president and sales manager:
R. A. Locke

Plants: Calgary; Regina, Saskatche-

Package: room size panels with sheathing; windows in place; interior partitions framed only; trusses; heating plant; bath fixtures; plumbing assembly; carport or garage.

## GREENLANE HOMES LTD.

Hawkesbury, Ont., Canada

President: Peter M. Schneider Plant: Hawkesbury Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; all doors prehung with hardware; trusses; garage or carport; joists and rafters; partition panels. Optional: plumbing, heating, air conditioning, wiring, appliances.

## THE HALLIDAY CO., LTD.

Burlington, Ontario, Canada

 $\begin{array}{lll} \textit{Brand:} & \text{Stylemaster} & \text{Homes} \\ \textit{Executive} & \textit{vice} & \textit{president:} & \text{Boyd} \\ \text{Withers} & & & & \end{array}$ 

Sales manager: Bert Johnstone

Plant: Burlington

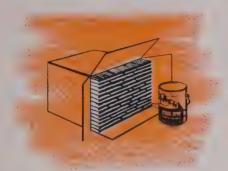
Package: exterior wall panels of room size completely sheathed and sided; windows in place and glazed; insulation in; interior gypsum applied; all doors prehung with hardware; roof panels; partition panels; ceiling panels; kitchen cabinets; precut floor joists, stairs, shelving, roof bracing; finished floors, paint, gutters.

Optional: bathroom fixtures, heating plants and ducts,

## why you'll be far ahead with

## OPTIONAL KOLOR PLAN

## on all jobs calling for red cedar shingles and shakes



## THE PLAN . . . IN A NUTSHELL

Under the Optional Kolor Plan, red cedar Pryme-Shakes or Shingles, factory-primed (gray), are sold as a unit with Fynal-Kote, a heavy-bodied lin-seed oil base finish coating. Formulated for uniform, one-coat coverage, Fynal-Kote is available in 22 modern colors.



## PLEASES "STYLE-CONSCIOUS" HOME BUYERS

With the Optional Kolor Plan expanded to include the entire Creo-Dipt line, you can offer your customers an unequalled selection of 8 styles of red cedar shingles and shakes in 22 attractive pastel and deep tone colors. Every architectural need can be met with ease



## NO DELAYS ALONG THE WAY

Although Pryme-Shakes (or Pryme-Shingles) and Fynal-Kote are sold together, Fynal-Kote colors can be requisitioned after shakes are delivered. Construction can proceed without waiting for sidewall color selection. With top quality materials assured, work moves smoothly from start to finish.



## NEATNESS INSURED WITHOUT "EXTRA EFFORT"

Since Fynal-Kote conceals construction blemishes, shake application and trim painting can be speeded. Color matching problems and touch-up time are both eliminated. In most cases, these savings in labor and materials more than cover the costs of applying Fynal-



## WINS QUICK APPROVAL

The Optional Kolor Plan provides the sure way to harmonious sidewall beauty. When your customer sees the results, he will be quick to give you an qualified "OK". So, too, will the FHA, for the Optional Kolor Plan fulfills 2-coat minimum requirements.



## NO "LEFT-OVERS" TO WHITTLE **DOWN PROFITS**

With Pryme-Shakes and Shingles furnished factory-primed in gray, on-the-job inventories are cut 75% to 90%. By the same token, you won't be loaded with an odd assortment of shakes prestained in a variety of colors after each job is completed. Balance can be used on the next job.

## PRYME-SHAKE STARTER STRIPS

New, easy way of applying the first course

(Sold under the Optional Kolor Plan)



All-in-one units consisting of 18" processed red cedar Pryme-Shakes, backer board and wood strip, Pryme-Shake Starter Strips are the perfect choice for the first course wherever scored red cedar shakes are used. They're big, easy to handle and easy to line up. They're permanently assembled, too! Heavy duty stainless steel staples go all the way through shakes, backer section and wood strip to form a permanent lock.

## mail this coupon for FREE literature

## CREO-DIPT COMPANY, INC.

North Tonawanda, N. Y.

Mail complete information to us, without obligation: Optional Kolor Plan Pryme-Shake Starter Strips

formed which carry water to discharge end of pump with positive pressure and continuous flow. Eleven models for wells from 20'-400' deep. Ratings include ½, ¾, 1 and 1½ hp models with capacities to 1,680 gph. Prices including motor control box from \$220-\$495. Robbins & Myers, Inc., Springfield, Ohio.



Frigidaire Imperial washer and dryer have illuminated control towers instead of dial panel on backsplash. Uniform height is 36" from working top to floor. Washer is 25" w., dryer is 30" w. Among washer features is a new underwater bleach and detergent dispenser, a 12-min. small load cycle and cold water rinse. Dryer door opens at a touch of foot pedal, does not



Norge automatic washer features a Dispenser Wheel which snaps on the agitator and applies water conditioners automatically. Operating on centrifugal force principle, wheel drops water conditioner during rinsing cycle to get out film that forms on clothes during washing. Water conditioner is added at same time as clothes and detergent so that cycle does not need to be stopped. Washer features either hot or cold rinse. 36" h., 26¾" d., 25½" h. W5-450, \$299.95. Norge, Merchandise Mart Plaza, Chicago 54.



One-man vibrator can be carried in car trunk. The UniViber is a plug-in electrical unit for vibration of concrete. Among its features: motor housed in the head, flexible casing used as handle, and switch set in casing in easy reach of operator. Machine can be plugged into a standard 115v. AC or DC source, turns at about 10,000 rpm. Vibrator bearings have nonmetallic separators, are splash lubricated. Head diameter is 3". Basic unit with 7' casing sells for about \$295 F.o.b. Viber Co., Burbank, Calif.

continued on p. 222

# WITH ADMIRAL HOMES



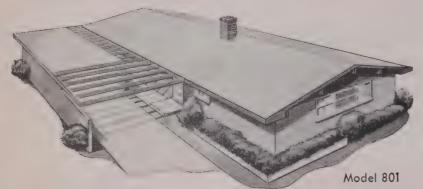


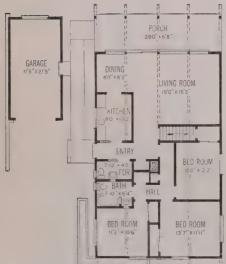
## ADMIRAL HOMES sell faster because they are ...

**ARCHITECT-DESIGNED** . . . to provide the utmost in livability and beauty.

**FACTORY-BUILT,** using only top quality materials and skilled workmanship.

**MEET ANY BUILDING CODE...** have full VA, FHA and local bank acceptance.





## The Newest Admiral..

A 3-bedroom, open-beam ceiling home with 1,232 square feet livable floor area. Full bath and powder room. Over-all size 28'x44' with 12'x20' garage and 6'x28' covered patio.



Build from over 29 popular designs . . . and over 150 different floor plans



RANCHES • CAPE CODS • BUNGALOWS • TWO-STORY HOUSES • CONTEMPORARIES



One of the many Thermopane®-glazed homes built by Keyes-Treuhaft, First Award winner of an annual NAHB Neighborhood Development Contest.

## "This always delights and intrigues prospective buyers"



Alex A. Treuhaft, President The Keyes-Treuhaft Company Cleveland, Ohio



## -says prominent Cleveland builder

"Nature is an astonishingly low-cost commodity that can be enjoyed indoors, in comfort, the year 'round when you use *Thermopane* insulating glass," says Alex A. Treuhaft.

"Whenever there's a beautiful view (we often create our own) we use large lights of *Thermopane* to bring it indoors to delight and intrigue prospective buyers. It's a sales feature we have used successfully to sell both prefabs and custom-built homes in all price ranges ever since *Thermopane* was first intorduced."

The public is well aware of the comfort, economy and convenience of *Thermopane*. It has been advertised consistently for over 12 years and is now in good supply. Try it in your houses.

For further information, call your L·O·F Distributor or Dealer listed under "Glass" in the yellow pages of phone books. Or write Libbey Owens Ford Glass Co., 608 Madison Ave., Toledo 3, Ohio.



Blanket of dry air insulates window

Bondermetic (metal-to-glass)
Seal® keeps air dry and clean

LIBBEY · OWENS · FORD a Great Name in Glass



require venting or plumbing. Models in pink, yellow, green or white. Frigidaire Div., General Motors, Dayton 1, Ohio.



у.

Evaporator unit of Pioneer's precharged air cooled air conditioning system is shown here in position on PAC-105 forced air furnace. These precharged units and tubing equipped with "break-away" valves are said to reduce installation time by half that required for field evacuated and charged units. Available in V-type or single-type evaporator coils in models with 1¾, 2, 3, 5 hp capacities. Compressor-condenser unit is remotely located, connected by precharged tubing fitted with "break-away" valves at each end. Tubing in eight lengths from 10'-50'. Pioneer Mfg. Co., Los Angeles 65.



Z.

Vibra shower head changes water's course from straight flow to high speed jets which are chopped into slugs by a two-section, fan-shaped blade. The shower head installs on any regular standard size shower arm. \$14.95. Reglar Co., Los Angeles 14.



Fluorescent brackets for bathrooms have GE trigger start ballasts. One above is 2½" wide, outlet box flange is 3½" wide, 21" long. Fifteen watt fixtures have canopy switch, run on 60-cycle AC current. Chromium plated. \$9.70. Moe Light Division, Thomas Industries, Inc., Louisville 2, Kv.



bb.

Sept-X is a new product to activate septic tank systems by helping to increase the bacterial activity in the tank, liquefying the solids and stepping up the flow of the system. 2-lb. can costs \$2.75, is recommended for each 500 gals. of tank capacity.

Dus-Top dustproofs and seals concrete surfaces in one brushing application. It contains a nonacid penetrating agent that is claimed to cure and harden concrete surfaces. One gallon covers 300 to 500 sq. ft., dries in from 4-6 hours. \$3.98 per gal. Both from the Rooto Corp., Detroit 21, Mich.



Valley View Acres (Second Addition), Tulsa, Okla. Attic Fans by Emerson-Electric Builder: Francis Construction Co. Electrical Contractor: K. L. Barnes Electric Co.



Tulsa builder selects

## Emerson-Electric attic fans to add sales appeal to new homes

From experience this Tulsa builder has learned that his homes sell faster when equipped with Emerson-Electric attic fans. He has discovered, as have many other builders coast-to-coast, that home-buyers are aware of the high quality for which Emerson-Electric has been known for 67 years.

Emerson-Electric attic fans are built to give many years of maintenancefree summer comfort; yet are priced for use in multiple home projects. And they are quick and easy to install with no expensive call-backs. So, for quicker sales and satisfied customers, make Emerson-Electric attic fans "standard equipment" in your homes.

Write for complete data. Ask for Fan Bulletin No. 1037 THE EMERSON ELECTRIC MFG. Co., St. LOUIS 21, MISSOURI



ACTIVE-AIR attic fans, 24" and 30" with lifetime lubricated ball-bearings in motor and fan shaft. The 24" fan, 5200 C.F.M., list price only \$76.55, ceiling shutter list \$27.85; list price of 30" fan, 7000 C.F.M., is \$85.30, ceiling shutter list \$31.00.



Here's another sales booster. Install the new 8" ACTIVE-AIR ventilator in kitchens, bothrooms, utility rooms. For walls or ceiling installation, mirror-finish grille. List price \$23.75.

All backed by the famous 5-YEAR factory-to-user GUARANTEE at no extra cost!

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## IDVALER KILLCHERNS

## \* LARGE REFRIGERATORS

-up to 7 cubic feet in the DWYER "69" with stainless steel freezer compartment and storage shelf in door.

## \* ROLL-OUT SHELVES

-all storage space in new \* FULL SIZE OVENS DWYER refrigerators is easily accessible. Shelves glide smoothly in and out on nylon rollers.

## ★ "LIFETIME" PORCELAIN

-from top to bottom. Entire kitchen fronts and seamless range-sink tops are finished in gleaming vitreous porcelain that retains beauty under hardest usage.

-separate bake and broil burners. Convenient high broiler on both gas and electric

## \* ROOMY STORAGE

-includes upper cabinets protected by insulated porcelain heat deflector over range burners. Full depth under-sink cabinet. Roll-out pot and pan drawer.

## ★ 4 SIZES

-from ultra compact models 39 inches wide to family size models 69 inches wide. Each of DWYER quality and convenience.

Modern kitchen convenience in compact space for the efficiency apartment, for hotels and motels. Facilities for easy hospitality and buffet meals on the livingporch, in the recreation room of the spacious home . . . in time-saving office installations. More than 50 thousand Dwyer Kitchens, installed over 10 years ago, are proving it in trouble-free performance today. Write for literature.

## DWYER PRODUCTS CORPORATION Dept. D-126, Michigan City, Indiana

~	
	r Products Corporation—Dept.0126.Michigan City, Indiana Please send literature and full information on Dwyer Kitchens.
1	Name
	Address
1	Firm
	TownState



for further details check numbered coupon, p. 248



CC.

Folding stairways are designed for minimum vertical clearance requirements. The one above folds in sections and is set within the jamb when the stairway is in a retracted position. Seven models for floor to ceiling ranges 6'-10" to 7'-5"-up to 9'-13" to 10' are available. Model above is for floor to ceiling range 7'-9" to 8'-6", cost about \$53.80. EZ-Way Sales, Inc., St. Paul Park, Minn.



dd.

Fire-Spy miniature fire alarm plugs into a standard AC outlet. A thermostat triggers the alarm if heat reaches 140° and continues until heat is reduced to about 100°. Unit is compact, easily wall mounted. It draws no current except when signaling. Weight is about 6 oz. Price, about \$6.95. Laramie Chemical Corp., Stamford, Conn.



Automatic fire alarm system has a master panel that houses an alarm bell, lights that indicate room location of fire and test buttons for each zone or room. Thermostat detectors are surface-mounted in attic, set for rate of rise and 190° fixed temperature detection. Room thermostats are set for 136° fixed temperature detection. Outside gong-type bell (10") is optional. Component parts are UL approved. Home Fire Watchman, Inc., Houston 6, Tex.



Three-cone ceiling diffuser adjusts to two different air patterns by changing the screws on the inner cone assembly. A spring lock arrangement makes it easy to remove inner cone. Diffuser has handsome. modern look, could be used practically anywhere in the house. Titus Mfg. Corp., Waterloo, Iowa.

continued on p. 234



## Beautiful MARLITE Paneling-cuts days off installation time, lowers "in place" costs!

Are you overlooking the real advantages of prefinished Marlite Plank and Block in your dry wall building and remodeling jobs?

Easy installation, for example. The 16" x 8' Planks and 16" square Blocks go up fast over old or new walls. An exclusive tongue and groove joint simplifies fitting, conceals all fastening . . . assures faster job completions.

Marlite provides more beauty and customer satisfaction, too. This easy-to-handle paneling is avail-

able in new Loewy "Companion Colors" plus distinctive wood and marble patterns. Moreover, the soilproof melamine plastic finish resists scuffs, stains, moisture. It wipes clean with a damp cloth; never needs redecorating.

Plan on Marlite Plank and Block to give walls and ceilings that luxury look. See your building materials dealer, consult Sweet's File, or write Marlite Division of Masonite Corporation, Dept. 1222, Dover, Ohio.



## that's the beauty of Marlite

plastic-finished paneling

MARLITE IS ANOTHER QUALITY PRODUCT OF MASONITE® RESEARCH



Architect and builder alike find in the complete Davis line tremendous opportunities for unlimited kitchen design. Davis flexibility provides the answer to a compact kitchen for apartment, motel, recreation room, institution or office. Sensibly priced, DAVIS units offer a new, sound merchandising tool for the aggressive builder!





Niles, Michigan

for further details check numbered coupon, p. 246



Flexible polyethylene pipe for carrying water has a smooth bore which helps reduce resistance to flow. Pipe is packaged in long coiled lengths, can be easily cut with a knife. Supplex pipe comes in ½", ¾" and 1" in 75-lbs. Pressure-Rated Series; 11/4" 11/2" and 2" in Standard Wall Series. It is manufactured by the American Hard Rubber Co., New York 13, N.Y.



hh.

Southco Masonry Rivets are placed into a 1/4" diameter drill hole, secured just by a hammer hit. Pin expands the shank of the rivet deep in the masonry to make a firm grip. To remove, draw pin, then rivet with hammer claw. Southco Div., South Chester Corp., Lester, Pa.



Three-quarter ton lever hoist can lift horizontally, vertically or at an angle. Hoist uses only 1/3 arc movement for operation, which makes it practical for jobs in confined space. Chain attachment 64" long gives flexibility for pulling or lifting jobs. Hoist costs about \$39.90. Thern Machine Co., Winona, Minn.



Plumb bob line reel has a cast alloy case which includes an unbreakable driving point for attaching to wooden surfaces. Slotted head allows you to suspend Line-Master from wire or cord, and adjustable line drag provides for pin-point setting of plumb bob. Reel has line capacity of 100' of 8 lbs. test line. Beaded aperture protects line. \$2.95 with 50' line, less plumb bob. LineMaster Mfg. Co., Seattle 24, Wash.



## Dustless Cleaning. Healthful Living

No built-in adds a more practical advantage to modern living than a Vacu-Flo central system. It's the answer to better, faster and easier cleaning. Thousands of installations verify its enthusiastic homeowner acceptance. Vacu-Flo's ingenious steel tube system and super powered vacuum producer, connected to convenient wall inlets, puts an end forever to lifting, lugging and tugging a machine around the house. Providing dustless cleaning, Vacu-Flo makes a home more healthful, too.

Prominent builders everywhere are featuring Vacu-Flo . . . say it's an outstanding sales aid regardless of the home price class. Right now is the time for you to check on Vacu-Flo. Write today.



No machine

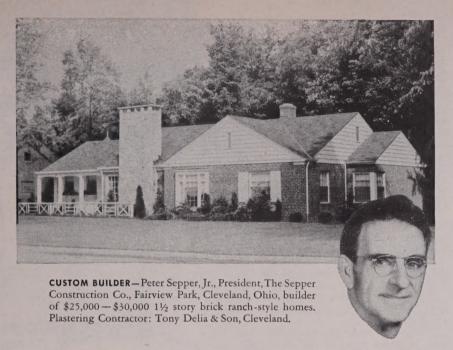
plug hose into wall inlet.



WRITE TODAY FOR FREE BROCHURE

**PRODUCTS** INC.

LOUISVILLE, OHIO



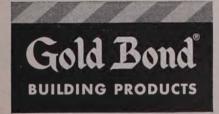
"Our reputation for fine luxury homes," says Mr. Sepper, prominent builder of 100 custom houses a year, "is based on top quality materials and workmanship from start to finish. Homeowners today expect the very best when they buy an expensive home. We've noticed that Gold Bond Lath-and-Plaster construction helps to give our homes the feeling of elegance and permanence that our type of prospects want. The entire sales job is easier when we specify Gold Bond Lath-and-Plaster construction."

# "Gold Bond LATH-and-PLASTER gives our homes the feeling of SECURITY people want"

"This is the time of the comparative shopper, as far as new development homes are concerned," says Mr. Bloom, builder of over 125 homes in the Akron area. "When people go from one group of homes to the next in looking for the best quality for the price, we've got to have quality construction that sells hard. We've found from experience that Gold Bond Lathand-Plaster adds an atmosphere of security to our homes. Sturdy, fireproof walls and ceilings are natural insurance that a home is built to last."

The feeling of permanence, luxury and safety is becoming increasingly important in today's home sales picture. Give *your* homes, either custom or development types, the advantage of quality construction. Specify materials that work together to give you the best results. Specify Gold Bond Lath-and-Plaster.





NATIONAL GYPSUM COMPANY . BUFFALO 2, NEW YORK



ND GYPSOLITE













PLASTER CEME



### MATERIALS

579. Teco trussed rafters. Timber Engineering Co., Dept. HH, 1319 18th St., N. W., Washington 6, D. C.

A new little folder tells how trussed rafter construction, using the Teco system, saves up to 30% in material and saves on time and labor, too. Using wedge-fit, split-ring timber connectors, enough Teco roof trusses for three or four houses can be carried in knocked-down compact units in a single truckload.

580. The 2.4.1 Plywood Floor System. Douglas Fir Plywood Assn., Dept. HH, Tacoma 2, Wash. 22 pp.

This laboratory report assembles engineering data, load tests and construction details on 2.4.1—the new combination subfloor and underlayment plywood panel. Report describes the system, talks about its structural adequacy, both by calculation and actual tests. Good construction practices and typical details are included.

581. How to Make Dry Basements. Medusa Portland Cement Co., Dept. HH, 1000 Midland Bldg., Cleveland 15, Ohio. 16 pp. What causes damp basements? How do you correct dampness before applying any type of waterproofing material? These are two main subjects described in this book which deals with dampproofing in both new and existing houses. Medusa waterproofings and water repellents are described.

582. Operation Basement. Western Pine Assn., Dept. HH, Yeon Bldg., Portland 4, Ore. 6 pp.

Step-by-step procedure for preparing basement masonry or concrete walls by water-proofing, fastening nailing strips to these walls, tricks of paneling installation and finishing. A tool checklist, a description of material requirements and drawings and photos help show best methods of installing wood walls in basements.

583. Bilt-Up Door Unit. Lumber Fabricators, Inc., Dept. HH, Fort Payne, Ala. 4 pp.

Folder describes this new pre-assembled door unit for swinging doors, by-pass sliding doors and double acting doors. It incorporates a one-piece solid jamb for greater strength and is available for partitions having a minimum thickness of  $2\frac{1}{2}$ ". Door frame is furnished with three members—two side jambs with casing applied and head jamb with casing applied. Photos show installation procedure which is fast—company thinks it can be done in from 5-15 minutes.

584. How to stop dumping dollars into waste. Hardwood Dimension Mfgrs. Assn., Dept. HH, 218 Broadway Nat'l. Bank Bldg., Nashville, Tenn. 4 pp.

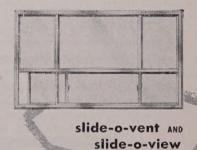
How to cut costs through use of semifabricated or completely machined Certified HDMA Wood Parts. Among the how-to's: how to reduce unit transportation cost; how to reduce raw material inventory; how to invest less in machinery and equipment not fully utilized; how to reduce ground and floor space; how to solve waste disposal; how to save in indirect labor costs.

585. Use Resilient Floors to Make Houses Sell Faster. Armstrong Cork Co., Dept. HH, Lancaster, Pa. 48 pp. Builders get a miniature merchandising

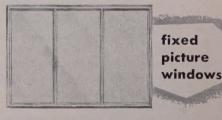
continued on p. 246



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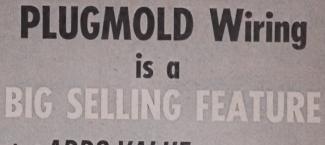
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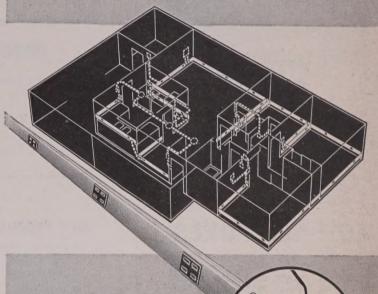
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### MISCELLANY

586. Lightolier Book. Lightolier, Inc. Dept. HH, 346 Claremont Ave., Jersey City, N. J. 16 pp.

Lightolier's newest fixture collections designed by Carl Moser, Maurizio Tempestini and Gerald Thurston. You'll see cluster

lights, wall lamps, lights on flexible cords, ceiling lamps, new bathroom fixtures, outdoor lights.

587. Beauty Tone Light Bulb. Westinghouse Lamp Div., Dept. HH, Bloomfield, N. J.

Portfolio includes photos, a booklet and information about the Beauty Tone bulbs in pink, candlelight and aqua. The light they give will soften a room's colors, create a warm feeling or subdue and tone down a room. Westinghouse feels these new colored bulbs will help enhance room settings, serve to highlight colors and textures in the most pleasing way possible.

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